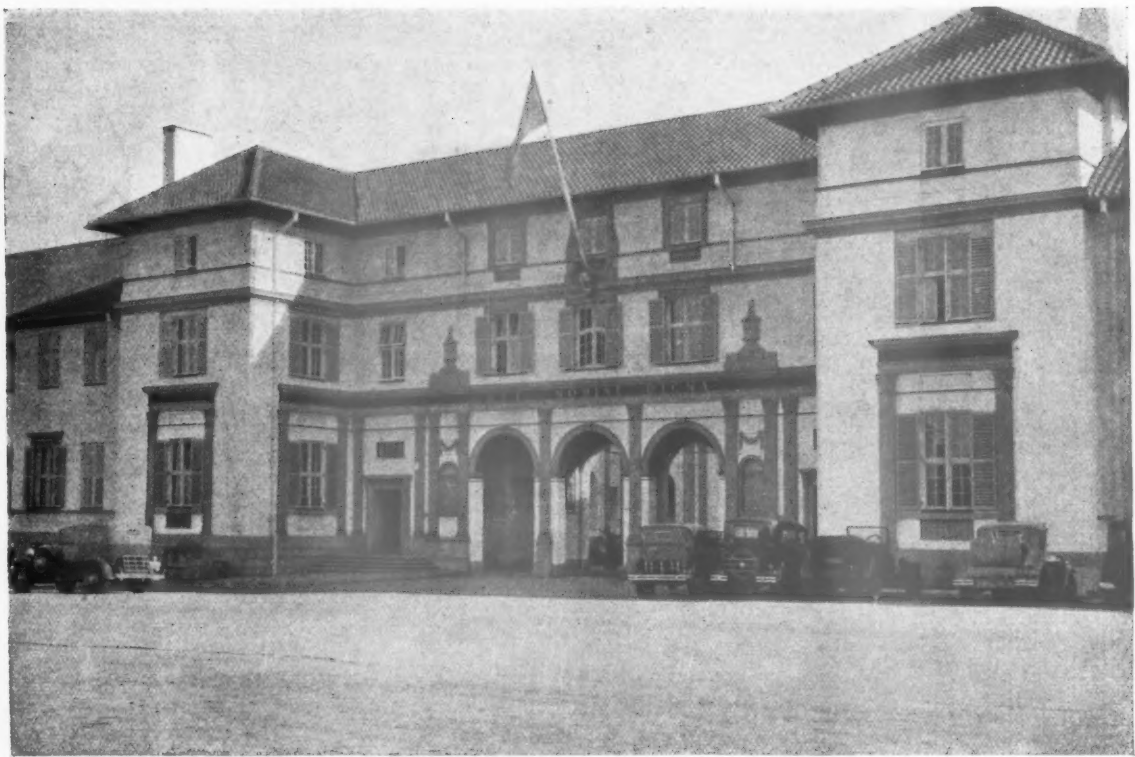


## LIVERPOOL METROPOLITAN CATHEDRAL THE FIRST SECTION IN COURSE OF CONSTRUCTION

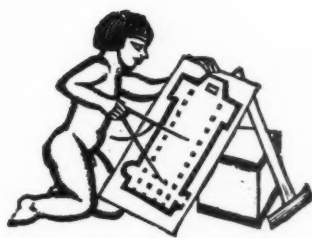


**R**APID progress is being made with the construction of the first section—the South Crypt—of the Liverpool Metropolitan Cathedral, of which Sir Edwin Lutyens, R.A., is the architect. Twelve months ago work commenced on the concrete foundations, some of which are over 50 feet below the crypt floor level, and now the south-east wall of the crypt stands 17 feet high. Above is a view looking across the site towards the completed arch entrance to the crypt.



## S T Y L E

*The promoters of the competition for a proposed Parliament House at Salisbury, Southern Rhodesia, have issued, with the conditions, photographs of the existing Government offices, which stand on a site adjacent to that proposed for the new building. Above is shown one of the photographs of the offices—a general view of the main front. In the conditions, reviewed on pages 223-224 of this issue, it is pointed out that “the architectural treatment of the elevations (of the proposed building) should be dignified and expressive of purpose, and that it might suitably follow the classic tradition, modified to suit the local and climatic conditions of Southern Rhodesia.”*



## WHAT THE PUBLIC WANTS

IN recent weeks a desultory correspondence has been going on in the *Daily Telegraph* which, if it has made no additions to architectural knowledge, has been valuable for its revelations of the present state of middle-class taste. In the first place, a correspondent took Sir Harold Bellman to task for the "unfortunate statement" that "If it comes to whether I would rather see a lovely piece of country laid out as a building estate or see people living in unlovely, mean streets in the centre of a great city, unhesitatingly I am in favour of breaking up the country and building."

The writer added arguments parallel to those advanced in this JOURNAL for building up rather than outwards, and mentioned the experiment to be made at Windsor on the St. Leonards Hill estate, where several hundred people will be housed in flats occupying only one acre out of the 33 purchased. A few days later the *Telegraph* printed a beautifully characteristic combination by a gentleman in Manchester Square, who thought public attention should be roused concerning some of the "monstrous blocks of flats, hideously 'modern' and barrack-like, that are tending more and more to disfigure Greater London." Unfortunately this correspondent gave as an example of his meaning a block which, as a third correspondent pointed out, is quite old-fashioned by current standards.

Nevertheless, it is pretty certain not merely that the Manchester Square correspondent is of the same opinion still, but that he represents the majority view among a class that, while sincerely anxious to save the beauties of Greater London, is actively helping to destroy them by its hostility to any architect not content to pretend that we are living in the sixteenth or at latest the eighteenth century. One of the chief tragedies of our day is that with so much zeal walks so little knowledge. An even greater tragedy is that architects themselves have been in part responsible for the extraordinary confusion in lay minds on questions of taste. We wonder if the profession is aware of the strength of the public aversion from any elevational treatment which does not harmonize exactly with the public's own vague associative values. This aversion was well expressed by a fourth contributor to the *Daily Telegraph* correspondence, who actually suggested a boycott of "modern" flats as a warning that—no doubt like flat roofs—they are out of place in this country.

The significant thing about this enmity is that it resides most strongly among the middle classes, who are the speculative builder's best customers. This middle-class prejudice is easy enough to understand.

The average City man (to take the beau-ideal) likes to work in surroundings that he would call imposing. He observes that when Finance or Big Business wants a new building, it usually chooses an architect who may be relied upon to support the dignity of his clients with something from the orders, helped out by sculpture guaranteed not to puzzle the simplest mind with a too recondite symbolism. Further, when the City man's wife comes to town to spend his money, she finds herself among similar surroundings.

Is it not excusable, then, that those comprising the backbone of England should view with virtuous horror any architecture approaching a contemporary expression? Useless to tell these protestants that this style is resuming where design left off a hundred years ago. They are not interested in tradition, though they will admire a supremely rational Georgian house (for is it not 200 years old?); and they like small country towns of the same period (for are these places not admitted to be quaint?)

None of this would matter if the middle classes were not responsible, even if indirectly, for the steady destruction of the English scene. The speculative builder is not sensitive to beauty, but he is extremely sensitive to what his clients regard as beauty. Already he is willing to supply "moderne" houses for those who want them. Would he not be equally alert to provide good designs if there was money in them? It is a reasonable inference.

The lesson of the letters to the *Daily Telegraph* is a plain one. It shows that a public opinion exists concerning architecture—but a public opinion almost entirely misguided.

Change by education must take a long time. A change brought about by a plain exposition of the inconvenience, obstruction and danger of present methods of housing development might take considerably less time.

It is exactly the type of person who has been writing to the *Telegraph* concerning the horrors of modernism that is loudest in complaint of the results of ribbon development. Such correspondents fail to see that it is they themselves who have created those results, and are continuing to create them. Sixteenth-century housing is incompatible with twentieth-century living, and with twentieth-century traffic.

The great middle classes cannot have it both ways, and the *Daily Telegraph* might make this clear to their correspondents. Universal housing chaos, or a modern attitude concerning all housing, is the issue—not long windows versus half-timber.



*The Architects' Journal*

Westminster, S.W.1

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## NOTES & TOPICS

### NORTHERN ACTIVITY

**I**N the course of a two-day journey across the North of England, from Liverpool to Hull, I was impressed by two things—the large amount of building activity in the North and the shortage of skilled operatives.

\*

At Liverpool, apart from the vast amount of work one can see, I was told that plans for over £1,000,000's worth of new buildings and alterations have just been passed, the majority representing private enterprise.

\*

At Manchester I found that, after many years of house building, flats are now rapidly building, spurred on no doubt by the recent visit of the new Minister of Health, Sir Kingsley Wood.

\*

At Leeds there is a veritable spate of slum clearance and rehousing, and a courageous initiation of building in pre-fabricated standardized units, on the Mopin system.

\*

At Hull, I found that the pulling-down of the last few years is being succeeded by a general building up again—the re-erected Wilberforce monument symbolically marking the new freedom.

\*

And at all these centres I was told of the dearth of good workmen—joiners who could do good work were scarce, bricklayers were at a premium, unskilled men had to tackle plastering, plumbers no longer have time to be electricians too.

\*

The only people who complained to me of lack of work were the local architects.

### ENLIGHTENED PUBLIC OPINION . . .

Recent correspondence in the *Daily Telegraph* has shown fairly clearly what the British middle classes

don't want in the way of architecture. They don't like freaks or monstrosities or abominations or flat roofs or long windows. In fact, they don't like flats at all if they can escape them; and certainly anything in the way of "modernism." So that's that—according to the general weight of opinion amongst *Daily Telegraph* readers.

. . . AND HOME, SWEET HOME

But what *do* they like? After all, architects ought to try to find out how the land lies.

\*

And last Friday the *Evening Standard* provided one answer in an article by a gentleman (or lady?) called P. A. Barron. The article was entitled "A Cottage in the Country on Modern Luxury Lines"—thus showing at once something of our national genius for compromise.

\*

The article was illustrated by photographs of two charming cottages; all thatch, axed elm-boarding, mixed brickwork, plaster, half-timber and doll's-house windows. And what were these—real genuine old country cottages? Not a bit of it. The caption to one of them read like this: "Frankly modern, except for its thatched roof, is the cottage below. Right away from the disadvantages of 'Ye Olde Tudor'!"

\*

"Frankly modern"; well, well—this is certainly carrying the war right in amongst the readers of the *Daily Telegraph*.

\*

And concerning the construction and equipment of these modern cottages, one cannot do better than let Mr. Barron state his case for himself:

Some of the new cottages are quite as good-looking as the old, and are naturally far easier to run.

Many have roofs of straw thatch or Norfolk reed, lattice-paned windows, beamed ceilings, and snug inglenooks.

Though they may look just as charming as those which are really old, they are not reproductions, but are built by modern methods.

The leaded windows with small square or diamond panes make the rooms look just as cosy as did the tiny casements made long ago. But these new windows are in steel frames which never warp, and, because we are fonder than our ancestors of fresh air and light, they are larger than the old. Many of the new cottages are provided with garages. All have modern kitchens—really modern, with hot and cold water at the sinks.

\*

As some of the windows illustrated are fully three feet square, modern architecture would really seem to have little further to go. And it only needs each family in Great Britain to be given one of these dwellings for the housing problem to be solved as well.

### EMBLEMS AND DESIGN

Although 109 designs were submitted in competition for a National Trust problem, not one was considered satisfactory. Another competition is, I understand, to be held.

\*

This is a surprising result. Does it mean that we have now few designers who feel excited enough by national design problems to produce their best work?

\*

Or have we, as a nation of designers, sunk thus far below our standard of some five hundred years ago, when, with a total population of about one-half of that of London





*For litter: the standardized container erected by the municipal authorities throughout Rotterdam.*

alone today, England produced the majority of its cathedrals, themselves national emblems of no mean order.

#### COLNBROOK

While everyone basked in Bank Holiday sunshine, some 500 of the inhabitants of Colnbrook worked grimly to transfer their homes. Not, I hasten to add, by reason of fire or flood or famine, but as the last operation in the Eton R.D.C. slum clearance scheme.

Colnbrook, once renowned as much for highwaymen as for cottages, is now as devoid of slums as it is of traffic. The new by-pass, you may remember, misses the village by a mile or so.

If Colnbrook does not therefore develop as a residential village it will not be through lack of re-established amenity.

#### JOHN TILLEY

If you have ever perceived the depth of his rich humour on the stage, or have caught a fleeting glimpse of his superb mimicry at a private party, or have merely listened to his gift of entertainment on the radio—then you will lament with me the sudden death of Mr. John Tilley.

Architecture, too, has lost a kindly and understanding commentator, for Mr. Tilley, in the days of his experience as journalist and advertising agent, had many contacts both with architects and their buildings.

He could *act* a building even better, I think, than Professor Richardson can—did you ever see him assume the immaculate countenance of a city bank, or scowl with the benignity of an insurance head office, or grin like a public house, or purr like a post office?

It was suggested that Mr. John Tilley should one day

entertain us at the A.A. with his unique gifts . . . it is a tragedy that we have lost him.

#### EXHIBITION AFTERMATH

Brussels Exhibition visitors were no doubt properly impressed by the huge revolving globe in the entrance hall of the British Pavilion. The original globe was 20 ft. across and weighed 10 tons, and the manufacturers (Henry Hope and Sons) were, of course, overjoyed to receive an enquiry from a Belgian firm for an exact replica, but a little dashed to discover that the diameter was to be reduced to 1 ft. 9 ins.

And the weight? I don't know, but it can't be very much. All the same, it just shows how good these exhibitions are for national prestige and international trade.

#### PUB SIGNS

As one who now and then takes quite an interest in country inns, more especially about this time of year, I have noticed recently one form of "inevitable progress" which seems both avoidable and, much more to the point, bad business. This is the standardization of signs carried out on all houses taken over by one firm of brewers.

That the chain-pub should be a sequel to the chain store is perhaps logical and unavoidable; but it would seem a poor form of publicity to sweep away simultaneously an individuality both harmless and charming. And, worse still, the standardized sign which appears instead is far from being attractive.

Trust Houses have shown how unified ownership can be made a thing entirely beneficial, and it is to be hoped that other firms will realize the superior self-interest, as well as the better public spirit, of their methods.

Even for a very thirsty man the sign of the Hound and Huntsman has a greater fascination than a grimly executed trade mark accompanied by a brassy legend of "BILLOW'S BOTTLED BEERS."

#### INSIDE OUT—

A friend of mine who has just come back from Norway has been shocked to the core of his insular soul by the discovery that the Norwegians build their wooden houses outwards from the inside.

Apparently the normal practice is to put up the framing and then line it with 2½ in. or 3 in. tongued and grooved boards. After that comes the bituminous felt or paper, and finally the weatherboarding.

I don't see why it shouldn't be done that way, though I agree that it must be rather a shock to see people living inside a house before it has got its outside coat.

#### —AND OUTSIDE NEWCASTLE

This same friend, by the way, arrived back at Newcastle in a smallish boat early in the morning and has bitter complaints about his welcome home.

Several passengers got up earlier still and demanded baths (salt water), only to be informed by a sympathetic stewardess that they were *quite* near Newcastle now and so, of course, the sea was *much* too dirty to be allowed inside the bath.

ASTRAGAL

## NEWS

POINTS FROM  
THIS ISSUE

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- "This is another competition to add to the list of those that invariably call for a 'competition' manner, design and presentation. . . . Youth is given its chance, and well, but not in the manner of youth" ..... 223

## HOUSING ACT, 1935

A circular dealing with the new Housing Act, 1935, which has been sent to county, borough, town, urban and rural district councils of England and Wales, was issued by the Ministry of Health last week. The circular points out that "the passing of the Act opens the attack upon the evil of overcrowding. The provision of new houses by private enterprise and otherwise is proceeding satisfactorily; the local authorities who have slums to replace are well advanced in the five-year campaign, and the new Act provides weapons for the elimination of overcrowding. The Minister is already engaged in discussing with the Associations of local authorities the most convenient methods of executing the new duties of local authorities under the Act, and he has in preparation a series of memoranda dealing *inter alia* with

(1) The new duties imposed on local authorities;

(2) The new financial arrangements which the Act makes; and

(3) The new provision made for redevelopment and for reconditioning work.

"The Minister hopes that these memoranda will be ready shortly for the consideration of the local authorities.

"In the meantime the Minister desires to emphasize the importance of the new work which has to be undertaken and the necessity that every member of the local authority, and every officer who is concerned, should be considering the problem as it affects his area. He is prepared, where local authorities are in a position to proceed to action under the Act forthwith, whether by commencing the erection of houses required to abate overcrowding or otherwise, to give, without awaiting the general issue of the proposed memoranda, any assistance in his power.

"It is, however, important that, pending

THE  
ARCHITECTS'  
DIARY

Thursday, August 15

LONDON MUSEUM, St. James's, S.W.1.  
Exhibition of photographs, "New London from the Air." Open until further notice.

LONDON SOCIETY. Visit to L.C.C. Rehousing Schemes in South London. Meet at Post Office, St. James's Street, S.W.1. 10 a.m. to 6 p.m. 2 p.m.

the issue of these memoranda, local authorities should be aware of the alterations made in the existing law, notably in regard to procedure with clearance areas and to the compensation payable to the owners of houses condemned as unfit, which come into immediate operation."

The Ministry encloses memoranda containing a description of these changes with certain suggestions as to the action which the local authority should take; and dealing with changes similarly made in regard to the operation of the Housing (Rural Workers) Acts, 1926 and 1931.

## THE ADELPHI

Tenants of the central portion of the Adelphi have received notice to quit by March 25 next. It is to be demolished and replaced by a building containing offices and flats. The architects are Messrs. Colcutt and Hamp, in association with Sir Aston Webb and Son.

## FIRST POLICE AIRPORT

The Kent County Constabulary, which is to have a new headquarters building at Maidstone, is also to be provided with the first police airport, at a cost of £100,000, and also at Maidstone. A police air training college may be added to the scheme.

BUCKS. ADVISORY PANEL  
COMMITTEE

The inaugural meeting of the Buckinghamshire Advisory Panel Committee was held recently at Aylesbury.

Those present included representatives of the County Council (appointed by the County Planning Advisory Committee), Borough Councils, Urban and District Councils, the Council for the Preservation of Rural England; the Institute of Builders and Panel Architects; also the County Planning Officer and the Secretary of the Central Panels Committee. Sir Leonard West, O.B.E., LL.D., J.P., D.L. (chairman of the County Council) was nominated chairman of the meeting.

It was unanimously decided to invite Lord Cottesloe to be chairman of the Committee. The Panels nominated by the Buckinghamshire Society of Architects were approved.

Mr. G. H. Jack, F.R.I.B.A., M.INST., C.E., F.S.A., addressed the meeting on the Panel System, and, after outlining the history of the movement, said that their goal could be described in very few words: "It is the desire on the part of a large body of both trained and untrained persons of goodwill to prevent unnecessary ugliness in building.

"The scheme is quite simple. All the interested parties recommend that an Advisory Committee of mixed membership

be set up in each county or part of a county to promote and administer the scheme and that smaller bodies (area panels) composed of architects, or if thought fit architects and builders, be set up to deal with the actual examination of the plans and render advice to the authorities. The duty will begin and end in the giving of good advice. It rests with the authority as to whether it is accepted or rejected."

## THE TRAFFIC CENSUS

The road traffic census which is being taken this week throughout Great Britain (with the exception of the County of London) will include for the first time both pedestrians and pedal cyclists, the numbers of which are believed likely to reach huge totals. Pedestrians will be counted at 2,250 points where footpaths are under 3 ft. in width. The results of the census will probably have great influence upon future road and housing estate planning.

## CIVIC CENTRE, NEWPORT

The Newport Town Council decided last week to proceed with the scheme for a civic centre on the Clytha Park site. The estimated cost of the scheme is £291,000.

## L.C.C. HOUSING REVIEWED

In the year ended March 31 some 3,500 houses and flats were completed on the L.C.C. estates, states Lord Snell, Chairman of the Council, in a review of its work. He adds that the L.C.C. is anxious to raise the standard of accommodation. "It has adopted new types of flats with bigger rooms and improved amenities. The outside appearance has not been neglected, and efforts have been made to secure interesting architectural variation by providing windows with greater width than height, flat roofs and sun balconies."

## MUNICIPAL BUILDINGS, STEPNEY

Sir Arnold Thornely, F.R.I.B.A., has been appointed architect for the new municipal buildings, electricity showrooms and offices for Stepney Borough Council to be erected in the Commercial Road, E.

## APPOINTMENT

Mr. Harry Allberry, A.R.I.B.A., F.R.I.A.I., having recently retired from the post of deputy principal architect in the Office of Public Works, Dublin, after thirty-four years' service, has accepted the Editorship of the *Irish Builder and Engineer*.

## CHANGE OF ADDRESS

Mr. H. B. Horner, A.R.I.B.A., has changed his address to 5 The Quadrangle, Welwyn Garden City, Hertfordshire. Telephone: Welwyn Garden 569.

ROYAL SOCIETY OF BRITISH  
SCULPTORS

The medal of the Royal Society of British Sculptors "for the best work of the year by a British sculptor in any way exhibited to the public in London" has been awarded to Mr. Ernest G. Gillick, A.R.A., for his statue "Ex Tenebris Lux," which was exhibited at the Royal Academy.

NEW HEADQUARTERS FOR THE  
PHARMACEUTICAL SOCIETY

Mr. Herbert J. Rowse, F.R.I.B.A., has been appointed architect for the new

headquarters of the Pharmaceutical Society, to be built in Brunswick Square, W.C., at an estimated cost of £195,000.

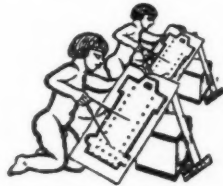
#### BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION

Messrs. Harvey and Wicks, of Birmingham, have been awarded the R.I.B.A. medal for a building of highest architectural merit erected in the area of the Birmingham and Five Counties Architectural Association during the five years to December 31, 1934.

The Award was for the Town Hall Buildings, Dudley.

#### R.I.B.A.

The R.I.B.A. Examination Board in India has arranged to hold the R.I.B.A. Final and Special Final Examinations in Bombay from November 1 to 9, 1935. The last day for receiving applications, which should be sent to the Hon. Secretary of the R.I.B.A. Examination Board in India, 43, Apollo Street, Fort, Bombay, is October 1.



## COMPETITION NEWS

### Parliament House, Southern Rhodesia

#### The Conditions Reviewed

January 31, 1936.—*Sending-in Day.* Proposed Parliament House, Salisbury, Southern Rhodesia, for the Government of Southern Rhodesia. (Open to architects of British citizenship.) Assessor: James R. Adamson, F.R.I.B.A. Premiums: £500, £300, £200, and £100. Conditions, etc., obtainable from the High Commissioner for Southern Rhodesia, Crown House, Aldwych, W.C.2. (Deposit £2 2s.) Any questions which competitors desire to ask should be addressed to the High Commissioner so as to reach him not later than August 26. The designs must be sent to the Assessor at 19, Silverwell Street, Bolton, not later than January 31.

#### GENERAL

**T**HIS is another competition to add to the list of those that invariably call for a "competition" manner, design and presentation. Though the competition itself should be a most interesting subject, and is assisted by very well drawn up conditions, yet one regrets that from the beginning the issue is clear cut and even preconceived; symmetry, classic tradition, dignity are words that keep the competitor in the well worn rut of the usual system. Youth is given its chance, and well, but not in the manner of youth.

#### THE SITE

As the site plan shows, the overall dimensions are 796 ft. 6 ins. by 495 ft. 10 ins. The central axis of the avenue approach is also the centre line of the site. Three photographs are issued with the conditions and are a valuable addition to the information shown on the site plan.

Careful descriptions are given concerning local climatic conditions, building materials and customary practice, all of which should help the competitor to a rational approach to his problem.

#### DRAWINGS REQUIRED

A block plan is to be drawn to a scale

of 1—500. All other drawings, except the  $\frac{1}{2}$ -in. details, are to comprise  $\frac{1}{16}$ th scale for plans, elevations, and sections.

The  $\frac{1}{2}$ -in. details required are of a portion of the main front, and one part of the interior of the House of Assembly.

Draughtsmanship is to confine itself to ink or pencil on white paper, walls are to be blacked in and no colour is to be used except for a pale buff wash on all plans. Elevations may be rendered in light grey with shadows conventionally indicated.

#### ACCOMPANYING DATA

The report is to consist of a description

of the design generally, a short skeleton specification of materials, construction and finish, and a review of methods of heating, ventilation, lighting and acoustical treatment.

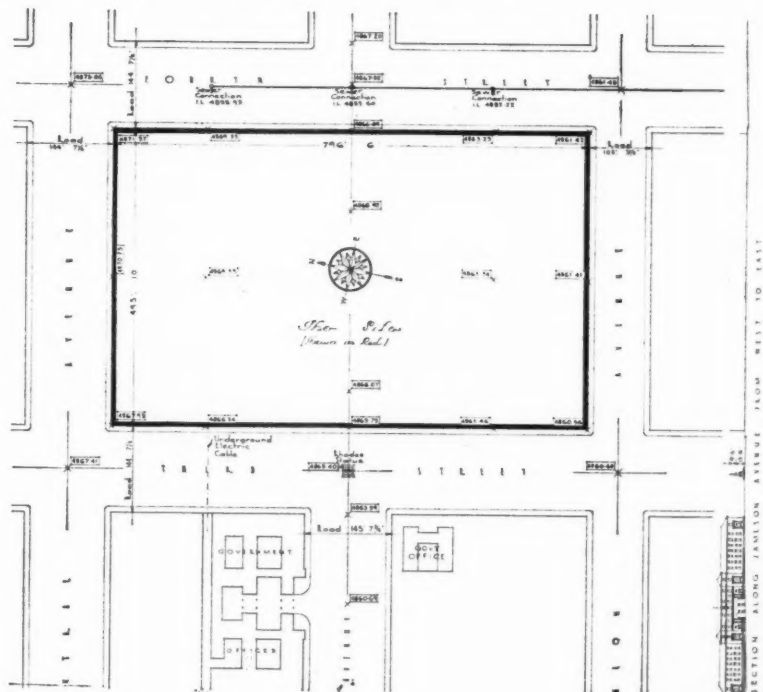
A schedule is required comparing the areas as specified and as provided, while the usual estimate is required based upon the cubic content of the building. Conditions for pricing are stated to be similar to those applying in England, and it is recommended that a cost of 2s. per cubic ft. should not be exceeded for the better parts of the building. Separate allowances have to be made for heating and ventilation, and for electric lighting.

#### ACCOMMODATION

*Section A* concerns the House of Assembly, which is to seat a Speaker, 60 members, 10 officials, clerk of Parliament and two assistants, 20 members of upper chamber and three reporters. The space allowed is 2,000 super ft. Remaining items of this section include galleries, division lobbies, rooms for Ministers, whips, committee rooms and dining rooms, etc. *Section A*, exclusive of House of Assembly, totals approximately 10,900 super feet.

*Section B.* Second Chamber or Senate. This is defined as "space to be provided for a future Second Chamber. This space at present may be shown as an enclosed court or garden prepared for roofing-in when a second chamber is required." The area given is 2,000 super ft.

The rest of this section totals an accommodation of 2,850 super ft., which will be used temporarily for other purposes but finally for committee rooms, etc.



Competition for proposed Parliament House, Southern Rhodesia: site plan.





Competition for proposed Parliament House, Southern Rhodesia: the Rhodes statue, on the axis of Third Street and Jameson Avenue.

*Section C.* Prime Minister's suite, of approximately 2,000 super ft., including offices and private rooms.

*Section D.* Lower Ground Floor. Not necessarily over the whole site. Accommodation required for heating chamber, electric services control, ventilating fans and apparatus, storage for archives (2,000 super ft.), strong rooms and services generally.

*Section E.* Caretakers' quarters of 680 super ft.

*Section F.* Enquiry Offices, Lavatories and Entrances. A note in this section states that the proportion of window space to floor area customary in Rhodesia may be taken to be similar to that required in England.

#### CONCLUDING NOTES

It is suggested that with a due regard for economy the planning of the building might be open in character, permitting of the introduction, where desirable of verandahs, internal courts, or garden space.

A note concerning accommodation states that the scheduled amount should be obtainable upon a lower ground floor, a ground floor and a first floor, and it is desired that a second floor should be provided over the whole or the major part of the floors below for subdivision as administrative offices. These, however, will not be plastered or subdivided internally till a later date.

#### REFERENCE AND PRECEDENT

Ulster Houses of Parliament.—Sir A. Thorneley, architect (THE ARCHITECTS' JOURNAL, November 9, 1932).

Pretoria Union Buildings.—Sir Herbert Baker, R.A., architect (THE ARCHITECTS' JOURNAL, May 4, 1932).

Delhi.—Sir Edwin Lutyens, R.A., Sir

Herbert Baker, R.A., architects (THE ARCHITECTURAL REVIEW, January 1931).

League of Nations.—competition designs (reference library, R.I.B.A.).

Finnish Houses of Parliament.—Helsingfors.—J. S. Sirén, architect (THE ARCHITECTS' JOURNAL, December 7, 1932).

Ottawa Houses of Parliament.—Darling and Pearson, architects (Journal of the Royal Architectural Institute of Canada, Vol. I, No. 1, reference library, R.I.B.A.).

P. P.

### Other Competition News

#### POLICE BUILDINGS, NEWBURY

The Standing Joint Committee of the Berkshire County Council recently discussed a proposed scheme for a new courthouse and police station at Newbury. With regard to the design of the buildings the Committee suggests that this should be decided by an architectural competition.

#### MUNICIPAL OFFICES, BLACKPOOL

The Blackpool Corporation has decided to obtain competitive designs for the erection of a town hall, municipal offices, baths and health centre on the Pembroke estate.

### Competitions Open

**August 31.**—Sending-in Day. Municipal offices, Swindon, for the Swindon Corporation. (Open to architects of British nationality, practising in the British Isles.) Assessor: Professor A. B. Knapp-Fisher, F.R.I.B.A. Premiums: £350, £250, and £150. May 25 was the last day for questions, and August 31 is the closing date. Conditions of the competition are obtainable from the Town Clerk, Town Hall, Swindon. (Deposit £1 1s.)

**September 2.**—Sending-in Day. The Liverpool Building Trades Exhibition, in conjunction with the Liverpool Architectural Society, has organized a competition to improve the amenities of suburban building

estates, and is offering eight prizes of £10 for drawings of the lay-out or planning of 20 pairs of semi-detached villas at a "T" junction of two roads. Assessors: Lt.-Col. Ernest Gee, F.R.I.B.A., Professor L. P. Abercrombie, F.R.I.B.A., Leonard Barnish, F.R.I.B.A. Premiums: eight awards of £10 each and £30 to be distributed at the discretion of the assessors. Conditions from the Competition Manager, Provincial Exhibitions Ltd., Renshaw Hall, Liverpool, 1. No deposit. The latest date for the submission of designs is September 2.

**October 1.**—Sending-in Day. Central county buildings, Hertford, for the Hertfordshire County Council. Assessor: Robert Atkinson, F.R.I.B.A. Premiums: £350, £250 and £150. Designs must not be submitted later than October 1. Particulars of the competition are obtainable from the Clerk of the County Council, Clerk of the Peace Office, Hertford. (Deposit £2 2s.)

**October 5.**—Sending-in Day. New Fire Station, Brighton, for the County Borough of Brighton. (Open to architects of British nationality resident in the British Isles.) Assessor: Stanley O. Livock, F.R.I.B.A. Premiums of £200, £125 and £75. Conditions of the competition may be obtained from J. G. Drew, Clerk, Town Hall, Brighton. (Deposit £1 1s.)

**October 16.**—Sending-in Day. Lay-out competition for Lump Fort site, for Portsmouth T.C. Assessor: E. Prentice Mawson, F.R.I.B.A. Premiums: £350 and further £200 divisible. Conditions are obtainable from the Town Clerk, Guildhall, Portsmouth. (Deposit £1 1s.)

**October 28.**—Sending-in Day. Competition for timber houses organized by the Timber Development Association. Assessors: Robert Atkinson, F.R.I.B.A., G. Grey Wornum, F.R.I.B.A. and E. Maxwell Fry, A.R.I.B.A. The competition is divided into two sections and competitors may enter for one or both. In each section there will be the following awards: first premium, £100; second premium, £30; third premium, £25.

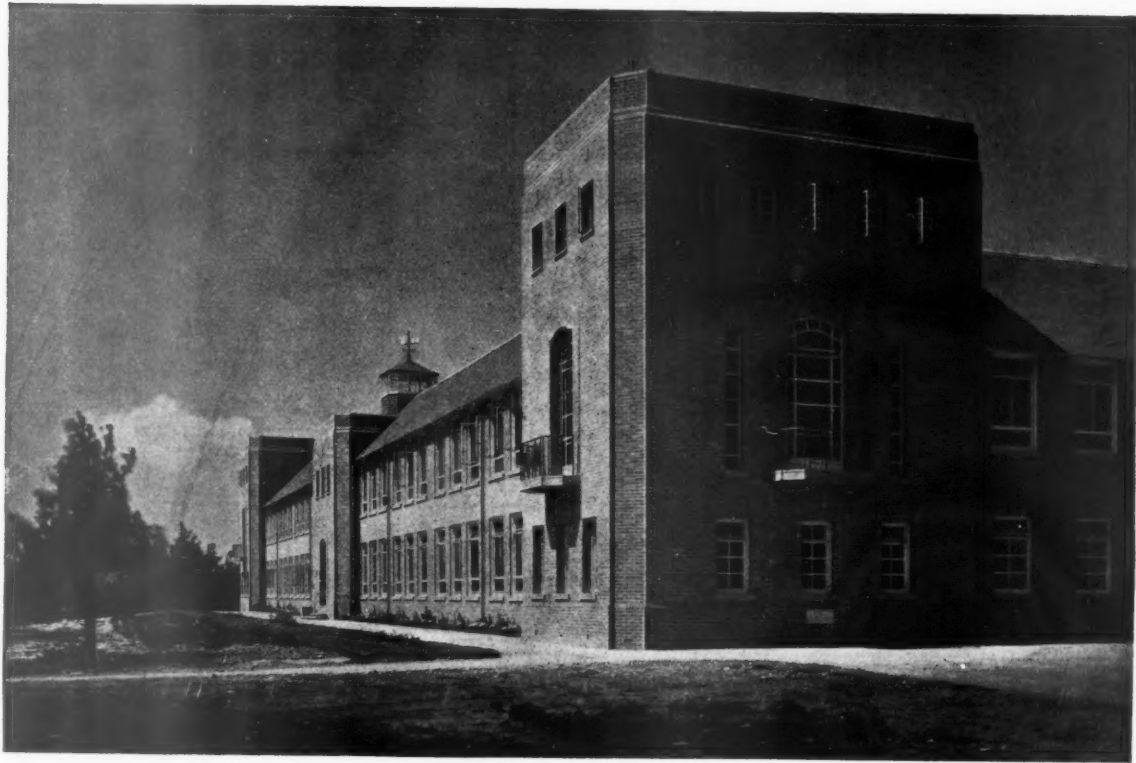
**SECTION 1.**—Designs to be submitted for a timber house suitable for a small family, the total cost to be £800. **SECTION 2.**—Designs to be submitted for a week-end timber cottage, the total cost to be £350. Conditions, etc., are obtainable from the Manager, Timber Development Association, 60-73, Cannon Street, London, E.C.4. The latest date for submission of designs is Monday, October 28.

**October 31.**—Sending-in Day. New technical college, Manchester Road, Bolton, for the Bolton Corporation. (Open to architects of British nationality.) Assessors: John Bradshaw Gass, F.R.I.B.A., and Arthur J. Hope, F.R.I.B.A. Premiums: £500, £250 and £100. Conditions, etc., are obtainable from Mr. John A. Cox, M.A., Director of Education, Education Offices, Bolton. (Deposit £2 2s.) The designs must be submitted to the Director of Education before October 31.

**December 31.**—Sending-in Day. Proposed town hall, Bury, for the Corporation of Bury. Assessor: J. Hubert Worthington, O.B.E., M.A., F.R.I.B.A. Premiums: £500, £300 and £150. Conditions etc., are obtainable from Richard Moore, Town Clerk, Municipal Offices, Bank Street, Bury. Deposit, £2.

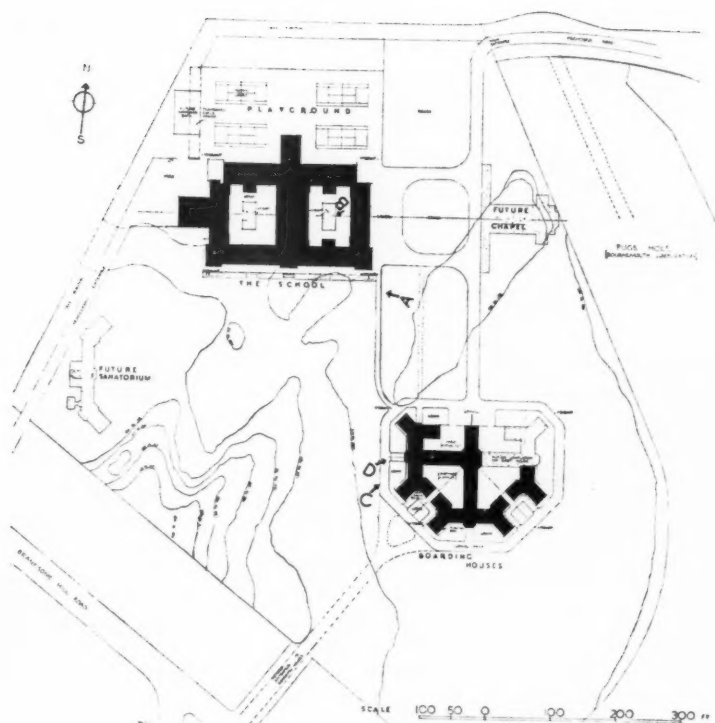


# TALBOT HIGH SCHOOL, BOURNEMOUTH



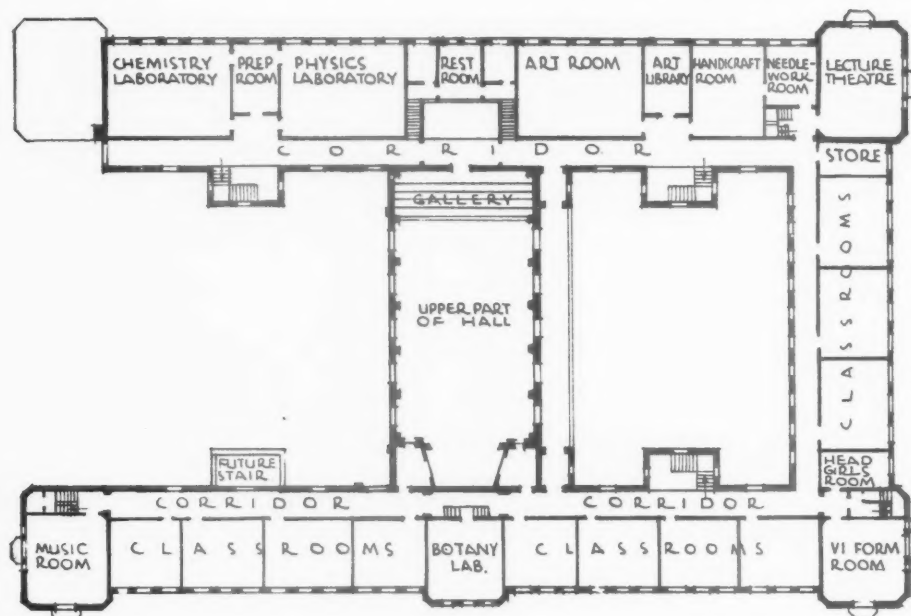
DESIGNED BY  
J. HUBERT  
WORTHINGTON  
(THOMAS  
WORTHINGTON  
AND SONS)

The original Bournemouth High School, founded in 1886, grew steadily in size until the original site in Norwich Avenue became too small for its needs, when a 16½ acre site in Talbot Woods was bought, near the existing playing field. Work on the new buildings was begun in 1933, and the new buildings were formally opened in May of this year. Above is a view of the school block taken from point A.

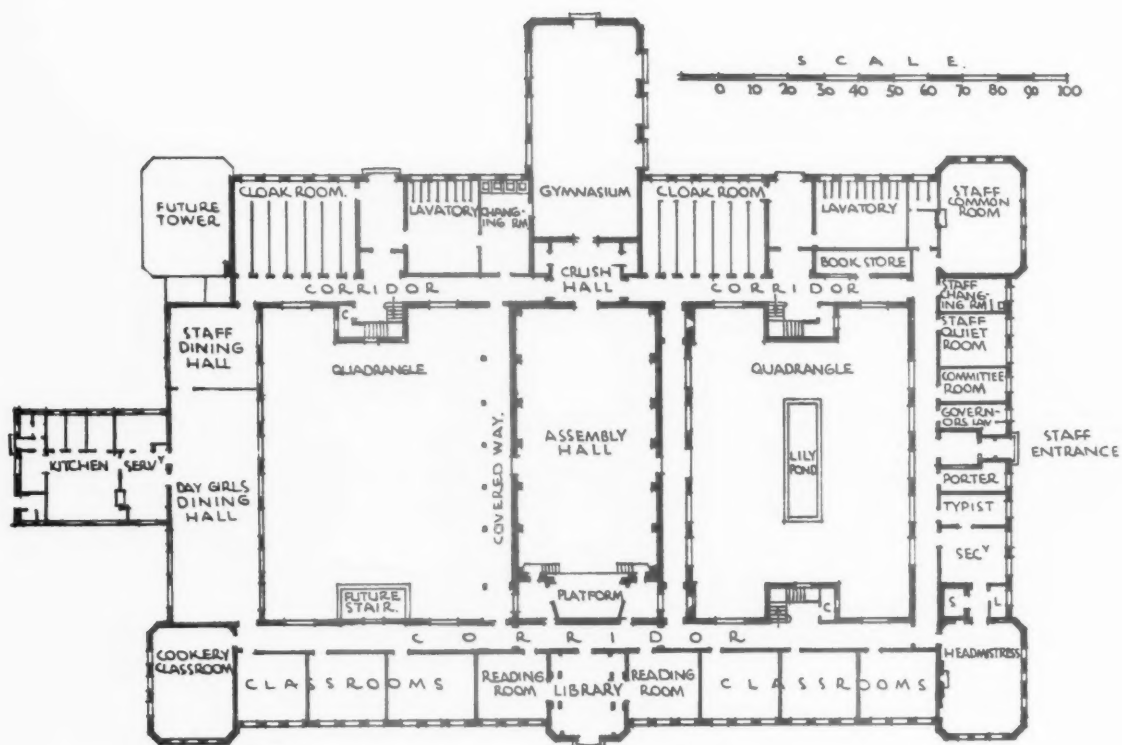


SITE PLAN

## T A L B O T H I G H S C H O O L F O R

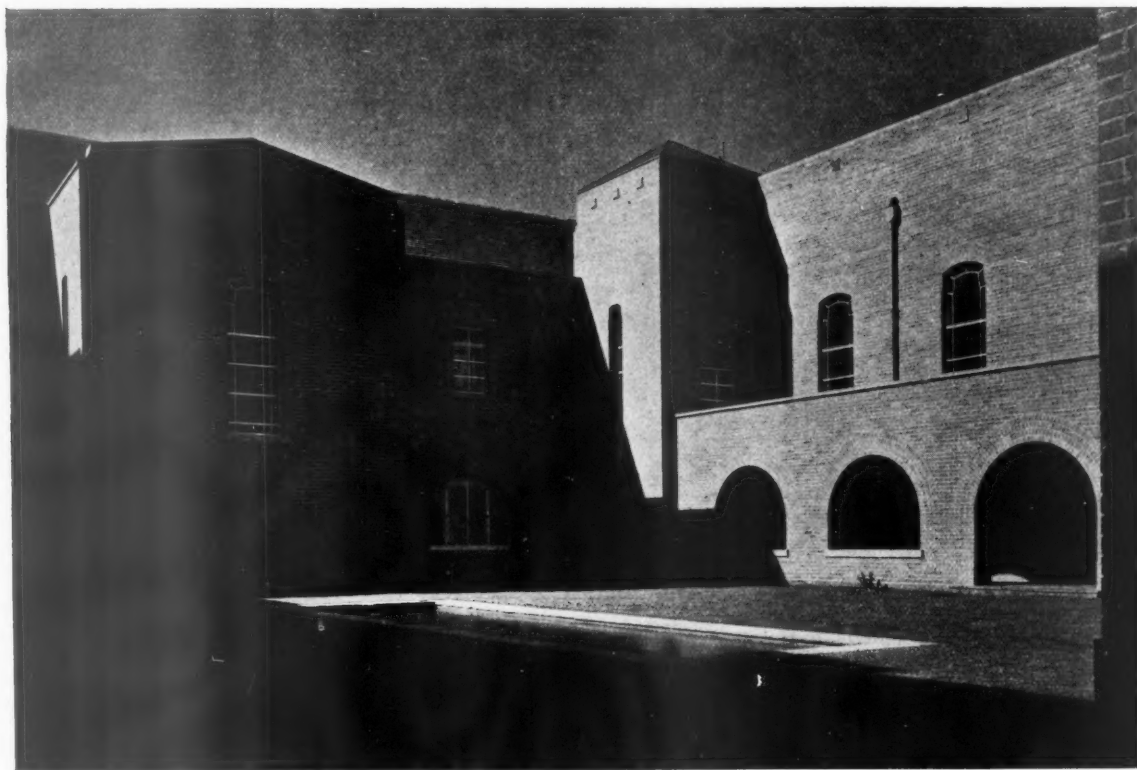


FIRST FLOOR PLAN



SCHOOL BLOCK: GROUND FLOOR PLAN

GIRLS, BOURNEMOUTH, HAMPSHIRE



DESIGNED

BY

J. HUBERT

WORTHINGTON

(THOMAS

WORTHINGTON

AND SONS)



*Top, the east quadrangle of the school building from point B; in the foreground is a lily pond with the assembly hall and an open arcade to the right; bottom, a view of the botany lantern in the centre of the south wing.*

## T A L B O T   H I G H   S C H O O L   F O R



D E S I G N E D

B Y

J.   H   U   B   E   R   T

W   O   R   T   H   I   N   G   T   O   N

( T   H   O   M   A   S

W   O   R   T   H   I   N   G   T   O   N

A   N   D   S   O   N   S )



**SITE.**—16½ acres close to the existing 9-acre playing field. The main school block has been placed at the north of the site, with the boarding house to the south-east, leaving an area to the west for a future sanatorium block.

**PLANNING.**—Accommodation is provided for 500 girls, both day pupils and boarders. The classrooms are placed on the south front of the school block, with laboratories and other special purpose classrooms on the north front; staff and administration rooms are to the east. The boarding house block contains three separate "houses" (see plan on page 230), the dining rooms of which are all served from a single central kitchen.

**CONSTRUCTION.**—The buildings are carried out in straightforward weight-carrying brick walls with reinforced concrete floors and tiled roofs carried on steel principals, the boarding houses having mansard roofs.

**FINISHES AND EQUIPMENT.**—Cheshire oak has been used for the joinery work in the assembly hall and library, floors generally being in hardwood, either block or strip. Heating and hot water supply is by oil-fired automatic boilers.

The illustrations on this page show, top, the assembly hall, with a seating capacity of 650; left, the gymnasium.

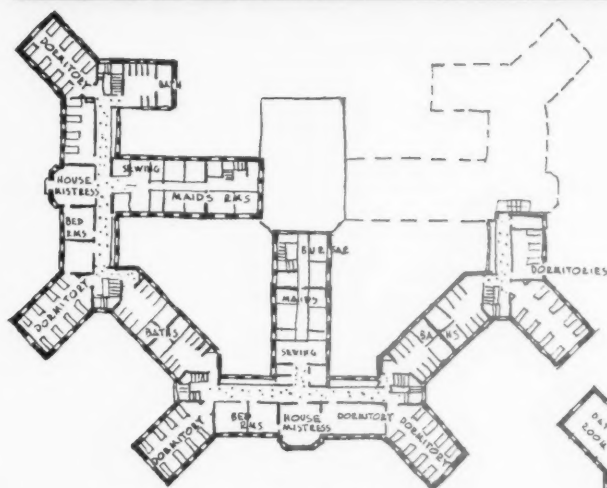


# GIRLS, BOURNEMOUTH, HAMPSHIRE

*Right, the library, the joinery of which is in Cheshire oak ;  
below, right, the central kitchen in the boarding house ;  
and, below, left, a classroom detail showing the combined  
casements and hopper lights.*

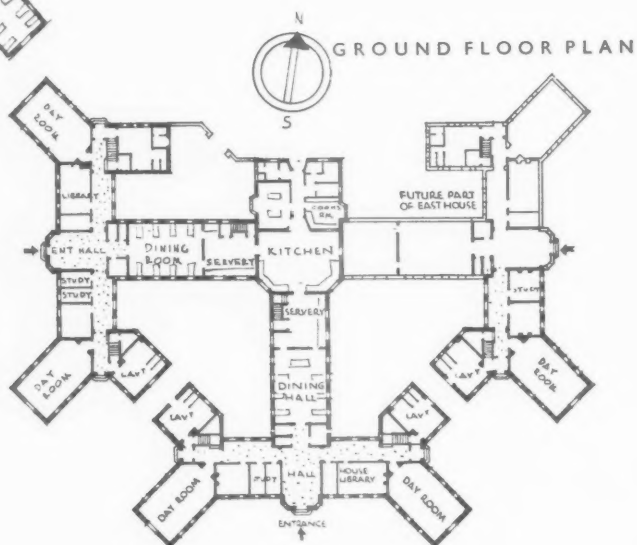


## T A L B O T   H I G H   S C H O O L   F O R



FIRST FLOOR PLAN

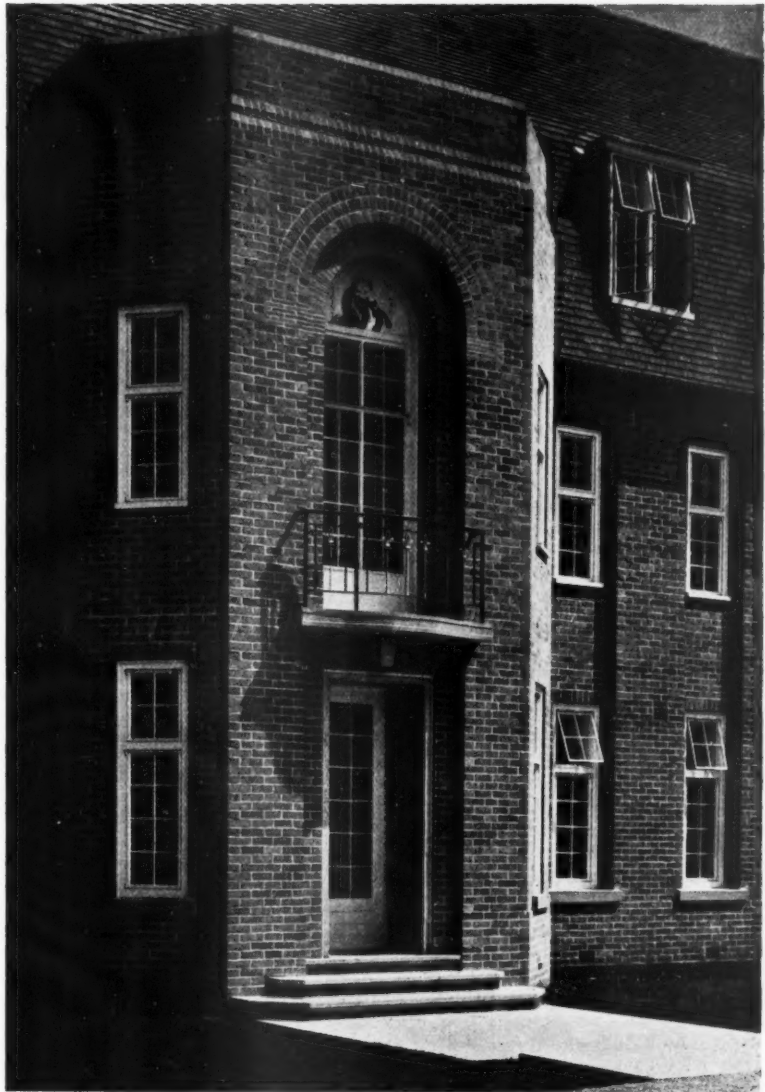
DESIGNED BY  
J. HUBERT  
WORTHINGTON  
(THOMAS  
WORTHINGTON  
AND SONS)



The boarding house building: a central kitchen serves the separate dining rooms of the three "houses," and the radial plan gives a maximum of light and air for the day-rooms and the dormitories above them. Above is a view from point C.

## GIRLS, BOURNEMOUTH, HAMPSHIRE

*The boarding house : right, a detail of one of the main entrances, taken from point D : the lunette is by Eric Gill; below, a staircase in reconstructed stone, with a balustrade in wrought iron. The other photographs show : a typical first floor corridor, and a dormitory.*



## LETTERS

FROM

## READERS

*School Exhibitions*

SIR,—I have in my mind a proposal which I think deserves a place in your columns. There is before me as I write a copy of your JOURNAL for July 25 which contains a series of criticisms of current exhibitions of work in our chief architectural schools. While full of admiration for the uncompromising originality and freshness of outlook here displayed, there is one small matter to which I should like to draw attention. I refer to the words in which the said criticisms are embodied, which, to my eye, have a distinctly traditional air. Many of these words were, to my knowledge, used in much the same sense by a certain Clerk of the Works at Windsor no fewer than *five centuries* ago. They are in fact about as up-to-date as stock brick and Portland stone.

If we are to keep abreast of the times we must do better than this.

There is no doubt but that words have a great potency. Thought and language are so inextricably intertwined that it is difficult—indeed almost impossible—for a person accustomed to speaking traditional English to keep his thoughts entirely free from some taint of the past.

It is true that language changes. Each century brings in new words and new combinations of words; but the process is at best slow—too slow—for these urgent and rousing times. Therefore, I say, let us root it out, let us make a clean sweep, let us go the whole hog (to use a traditional vernacular expression) and plump, once and for all, for a real, genuine, new, international, progressive, scientific, synthetic, logical, practical, æsthetic, functional, unsymmetrical, sanitary, chromium-plated and (above all) *contemporary* Esperanto.

I. BICKERSTAFF

SIR,—You are to be congratulated on the criticisms of school exhibitions which you published recently. Intelligent and constructive criticism is essential if the standard of architecture is to be raised; in fact it is clear that architecture will continue to stagnate unless there is continuous, healthy criticism.

V. HARDING

*New Housing Bill*

SIR,—From some recent reports concerning the New Housing Act, it is

I. BICKERSTAFF

V. HARDING

WALTER PAMPHILON, A.R.I.B.A.

apparently intended that any compartment under 50 super feet in floor area shall not be reckoned as a "room" for the purpose of defining the standard of accommodation of a dwelling.

The maximum number of persons permitted to sleep in a house will be regulated by the total number and sizes of the rooms.

This minimum area is above that which is being provided for the third bedrooms in a vast number of houses and in such will, other things being equal, result in an increased cost of £5 to £10 per house, according to the method adopted for embracing the additional cubical extent.

What would seem much more important than mere extent of floor area as contributing to the healthy occupation of a room is that such accommodation should be provided with the means of efficient ventilation and of the opportunity for the entry of as much sunlight as possible.

These recognized health factors, which none dispute in external conditions, may be easily and very economically introduced in small third bedrooms in the majority of houses by the provision of windows on *two* aspects. The secondary window need but be small and the sill high and is a much more desirable contrivance for obtaining a view of the heavens than looking out of an air brick. Were the two windows kept open even a little, effective through ventilation would result on the slightest (outside) breeze, and according to aspect the additional window might be the means of letting in more sunlight or providing this benefit otherwise denied by a single window.

What is the health advantage of a large room over a small one suitably lit and ventilated if the former *lacks* these conditions?

The *shape* of the area of a room might be regulated. It will readily be perceived that even a 50 super feet room, if approaching 5 ft. in width, which is sometimes incidentally and economically possible, is not very convenient for occupation.

From conversation with some of those who have been unfortunate enough to purchase small houses with a more or less north aspect (in the principal rooms of which the sun is never seen) it appears the occupants would prefer the rooms even smaller than they are at present, providing they had the

advantage of the sun in the principal rooms.

With the normal type of semi-detached house, where the principal rooms are divided by the party walls it is impossible to obtain in these through ventilation and entry of sunlight by the provision of windows in two aspects, but with numerous other types it is quite an easy matter.

In these days when electricity as a means of heating is taking the place of open fuel and flue fires, the matter of ventilation should receive especial attention. With windows in two aspects of a room all can be well. Otherwise the doors should be fixed ajar (an inch or less will suffice) during the night, by means of a small cabin hook. This arrangement makes for good through ventilation with a window slightly open and prevents "stagnation" of the atmosphere so unhealthy and enervating, and at the same time is a convenient device in circumstances where young children are occupying other rooms.

Blocks of flats may be a temporary solution of the housing problem, but from the general arrangement of the plans of such buildings dictated with a view to economy, the great health giving factors are not so easily introduced into the interiors to the same extent that is easily possible in houses.

Apparently at present there is no further anticipated legislation that would be calculated to *prevent* any one, old or young, or all the occupants of a house sleeping *together* in one bedroom, small or large, with the windows and doors closed. However, it is quite conceivable that the Minister of Health eventually may have jurisdiction, even over these matters, and that night raids by duly qualified and eminently respectable inspectors may result.

WALTER PAMPHILON

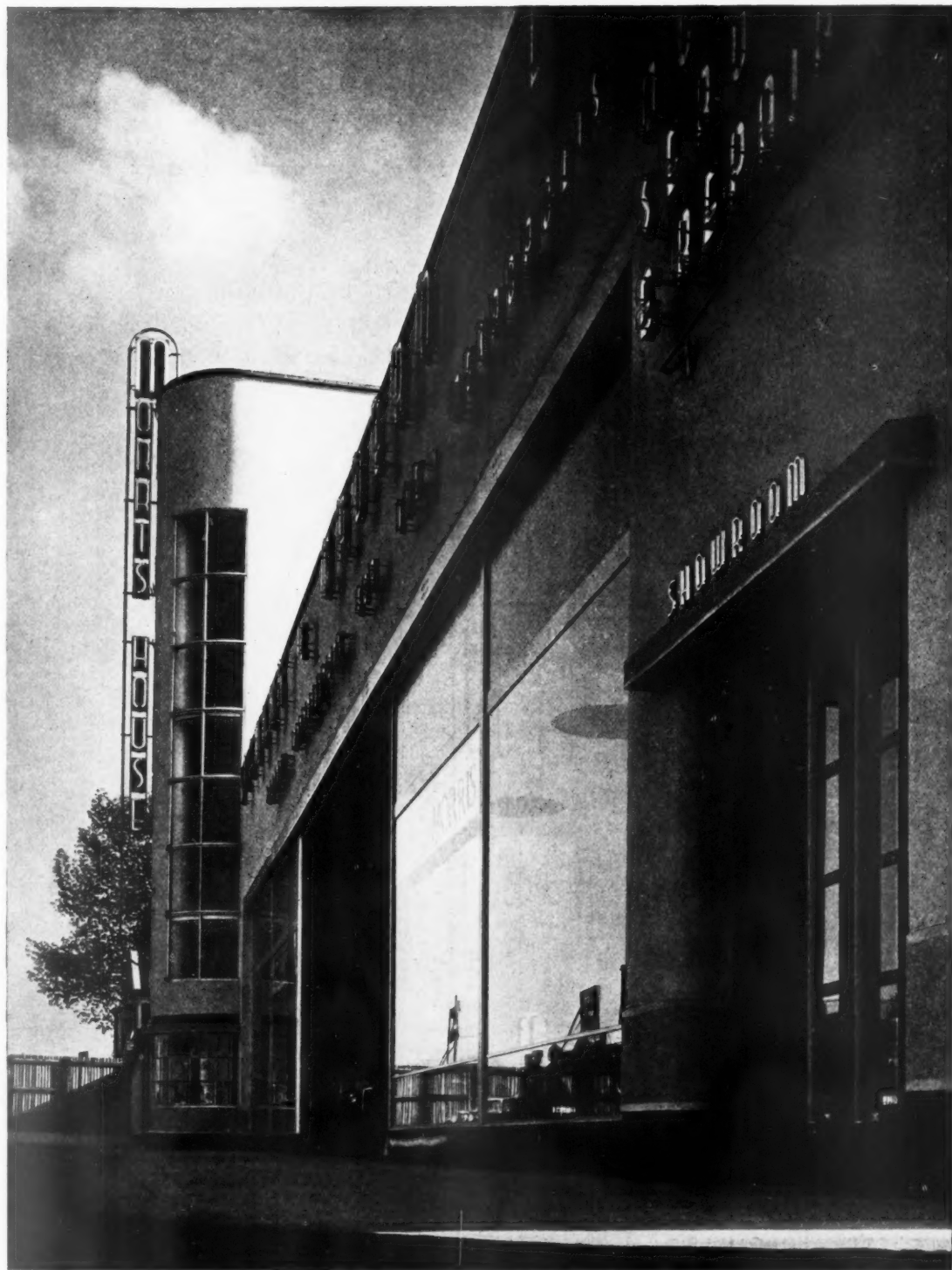
L.C.C. Housing Scheme  
Opposed

A Hackney Marsh Defence Committee is being formed to oppose the L.C.C.'s scheme to appropriate 30 acres of the marsh for housing. The scheme was put forward "with the greatest reluctance" and approved by the L.C.C., which now awaits the Minister of Health's certificate. The land is required to rehouse people from Stepney and Bethnal Green, and the L.C.C. has offered 50 acres of open land at Chigwell in compensation. This land, however, is thought to be too far away from Hackney.



# WORKING DETAILS : 307

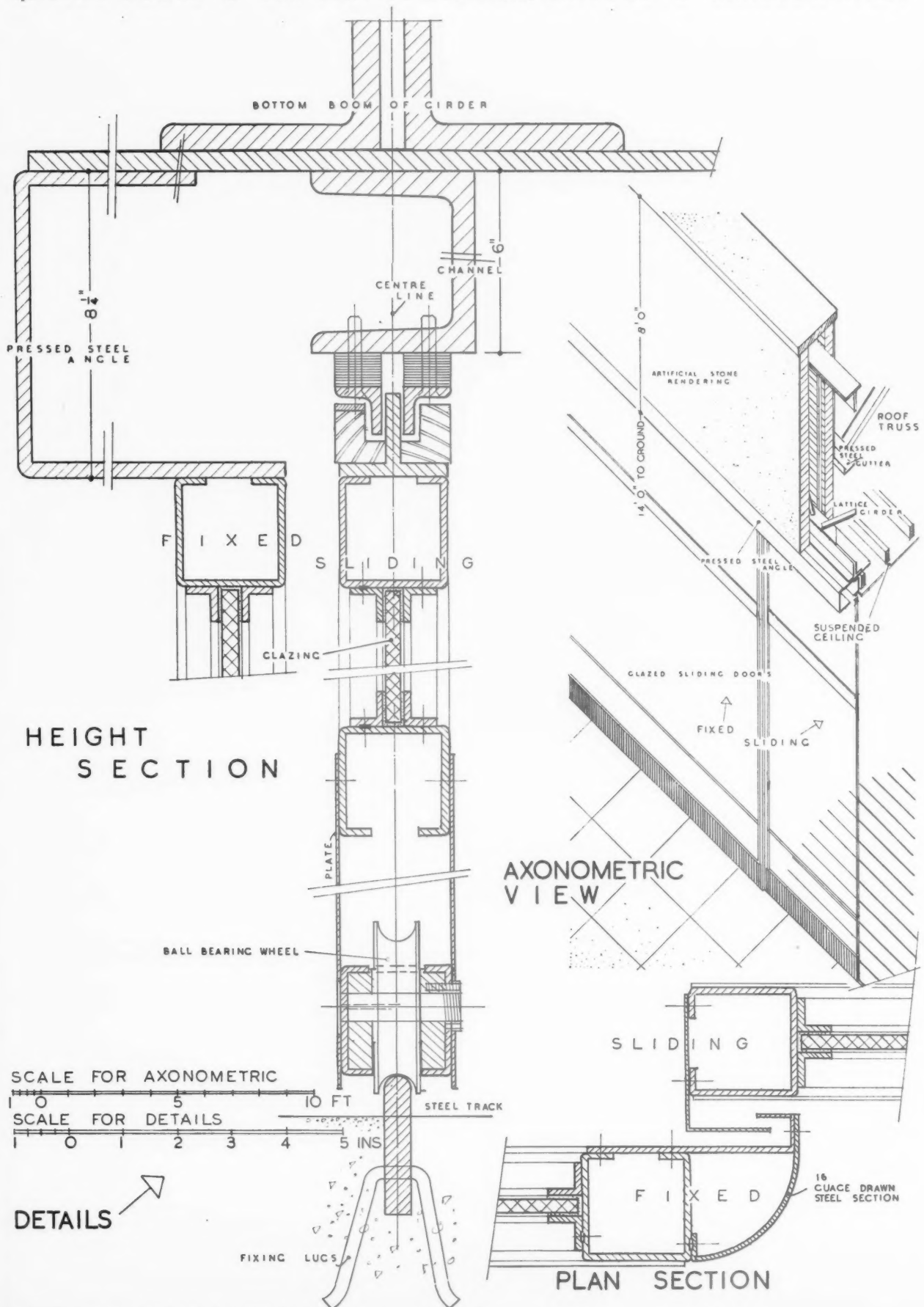
SLIDING DOORS • CAR SERVICE STATION, CATFORD • CAMERON KIRBY



The showroom doors illustrated above are arranged to slide away to one side, and run on a steel track embedded in the floor. The deep lattice girder which spans the 70 ft. opening does not carry any of the weight of the doors, but merely carries a guide to keep the doors vertical. An axonometric and details are shown overleaf.

# WORKING DETAILS : 308

SLIDING DOORS • CAR SERVICE STATION, CATFORD • CAMERON KIRBY



Axonometric and details of the sliding doors illustrated overleaf.  
234

# WORKING DETAILS : 309

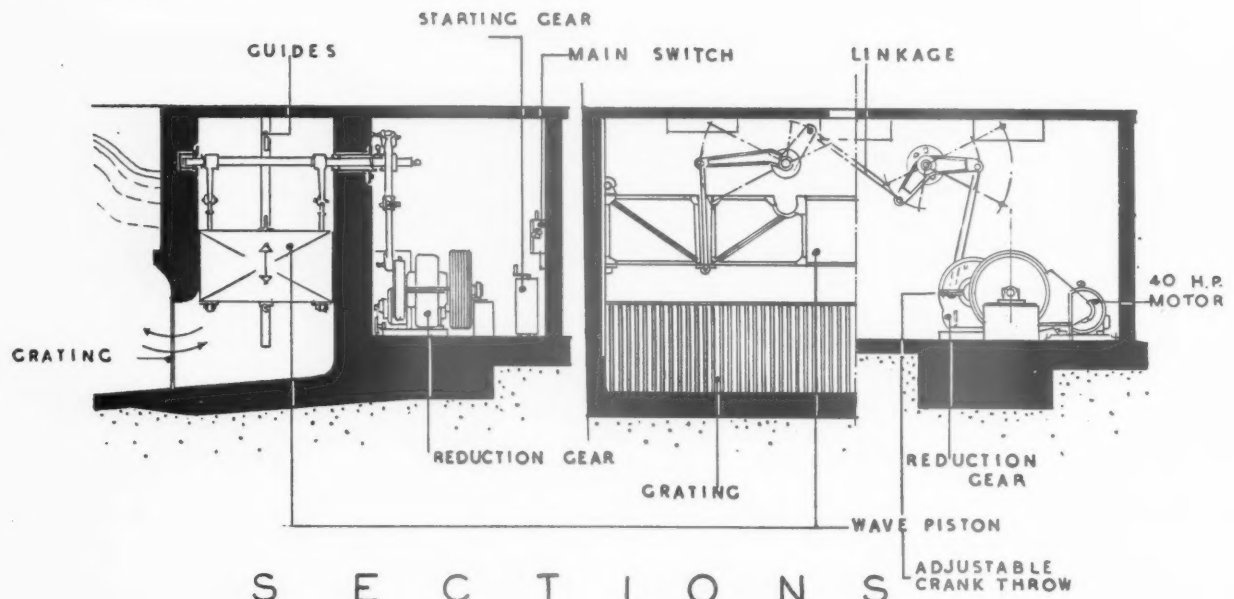
WAVE MACHINERY • DOLDER BATHS, ZÜRICH • EMIL REIN



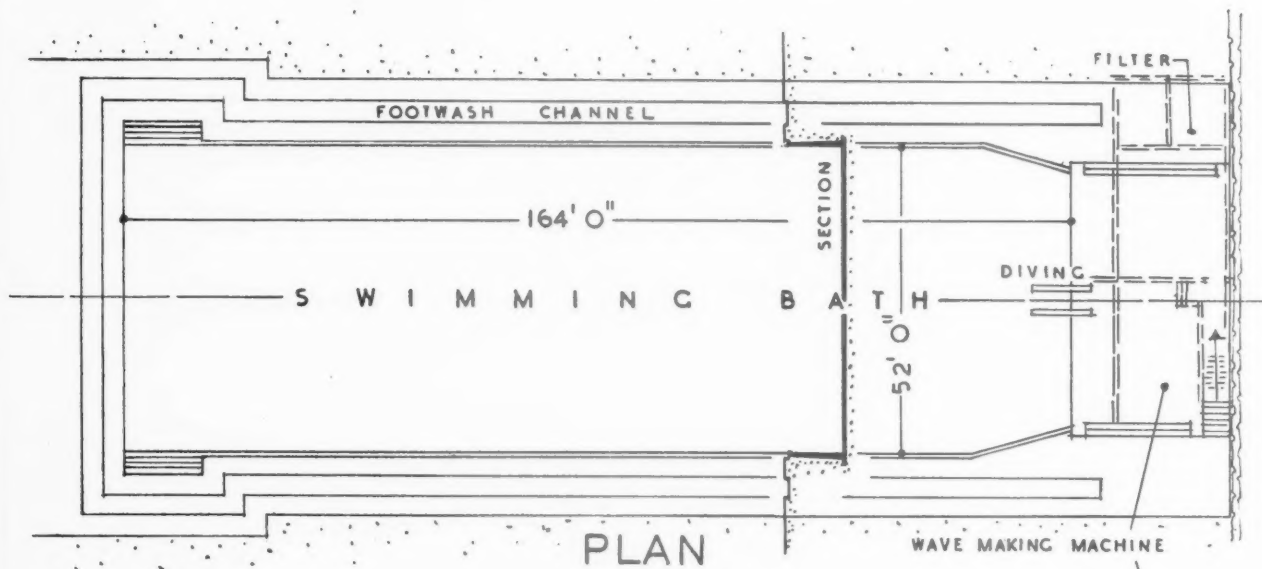
This wave-making device consists essentially of an electrically-driven piston type pump; the piston, about 25 ft. long by 5 ft. broad, operates in a waterproof reinforced concrete chamber opening off the deep end of the bath. The piston is driven by a 40 h.p. electric motor through a crank with a variable throw which can be adjusted to give waves of different sizes: small changes in the speed or stroke of the piston have a considerable effect on the size of the wave produced. The power required is not constant, but varies with the height of the waves; a large number of bathers tends to damp out the waves altogether, thus increasing current consumption. A considerable amount of research work was carried out by the Zurich firm of Escher Wyss in order to determine the most suitable bath section and the impact load of the waves on the end wall of the bath.

# WORKING DETAILS : 310

WAVE MACHINERY • DOLDER BATHS, ZÜRICH • EMIL REIN



## SECTIONS



SCALE 5 0 5 10 15 20 FEET

SCALE 10 0 20 40 60 80 100 FEET

Plan of bath and sections of the wave making apparatus shown overleaf.



## L I T E R A T U R E

## ANALYSIS OF A CITY

[BY PHILIP H. MASSEY]

B.Sc.(Econ.), F.R.Econ.S.

*The Rebuilding of Manchester.* By Sir E. D. Simon, M.A., and J. Inman, B.A. London: Longmans, Green and Co. Price 5s. net.

THIS book is divided into two parts—"The Past" and "The Future." The purely historical section is very short; we arrive at the Tudor Walters Report on page 12. The subsequent chapters on reconditioning, the building of new houses, and the growth and planning of the city, provide us with a little more historical information, but are mainly devoted to the work of the Corporation rather than to the general development of the city after 1868.

Now the authors are not writing a history book, their subject is *The Rebuilding of Manchester*. But if the object of the early pages was to show history as philosophy by example—and the words of the preface indicate that it was—those pages might well have been more numerous and more closely related to the plans put forward for the future.

The history of Wythenshawe is given in some detail, and the following conclusions, to apply to such developments in general, are drawn:—

- (1) that if the garden city (or satellite garden town) movement is to extend it, must be sponsored by our great cities;
- (2) that the city must own at least the major part of the land;
- (3) that the city should be the local authority for the area.

In regard to the second condition the authors emphasize that "it is the landlord power which is enabling Manchester to preserve the amenities of Wythenshawe in all kinds of ways which would not otherwise have been possible." Negatively, the experience of Becontree is further evidence in support of the third point.

This book deserves attention. It gains considerably from being devoted to one great city, and it has been written almost throughout in a positive spirit. An exception to this, and a disappointing feature, is the authors' belief that the housing standards of today, in respect of size and density, may be regarded as permanent.

The book has been framed on broad lines. The authors have clearly seen the wood, and left to others the analysis and measurement of individual trees. There are three maps: the first shows the Manchester of today, the second Manchester as it might be in 1985,

and the third a replanning scheme for the centre of the city.

It can be seen that Manchester has a curious shape. Before Wythenshawe was added the boundary roughly followed the eastern part of a circle of four miles radius round the Town Hall. Now, the city is over twelve miles from north to south and only about four from east to west. It is noted that the usual thing is for a city to be more or less circular about its civic centre, and, of course, except in an administrative sense, this has happened in the case of Manchester.

The centre of the city is approximately the same size as the City of London, and is, as the authors put it, somewhat undistinguished. Round this centre lies the slum belt, about one and a half to two miles wide, containing about 80,000 houses, built mostly before 1868, and almost all before 1890. Further out are the houses built under more recent bye-laws, and the areas developed since the War; lastly, in the extreme south, is Wythenshawe.

Considerable reconditioning has been carried out in the slum belt so that nearly every house has a separate paved backyard, a water-closet, and water laid on inside the house. There are practically no back-to-backs, no cellar dwellings, and no really bad courts. On the other hand, nothing has been done to improve the arrangement and planning of the houses, which remain jammed together at an average of about forty-five to the acre, interspersed in places with factories, and almost devoid of open spaces. Conditions are worse still, in the opinion of the authors, in the 1,600 or so houses let in lodgings, which cannot be condemned under the 1930 Act, as they are not in themselves unfit for human habitation.

It is considered that the only satisfactory course is to clear and replan the whole area, but that the overtaking of shortage, by building about 20,000 additional houses, should come first. It is pointed out that the policy of the City Council has been in accordance with this view, but that their hands are now tied by the Government.

It is emphasized that the complete replanning of the city should precede slum clearance and rehousing action.

The plan of rebuilding, as set out in the book, allows:—

- (1) ten years for the building of 20,000 additional houses;
- (2) forty years for rebuilding the slum area;
- (3) fifty years for rebuilding the business centre of the city.

The second stage would involve the demolition of 80,000 houses in the slum belt—to be replaced by 40,000 flats

built in that area and 40,000 cottages. It is suggested that the work involved in the first and second stages should be carried out by the City Council.

On the question of "cottages or flats," Sir Ernest Simon has moved somewhat towards the latter. It is acknowledged that "the modern working-class flat is a very different thing from the gloomy and restricted tenement of thirty or forty years ago," that "by careful design and planning they can no doubt be made better still," and finally that it would not be practical politics to pull down the 80,000 houses in the slum belt and replace them by suburban cottages, leaving the old area derelict. The final conclusion reached is that

"It therefore seems on the whole desirable that the land available for housing in the slum belt should be covered with houses at the maximum density which is healthy, convenient, and economical; that is to say, four-storey tenements at about forty to the acre."

The 100,000 new houses altogether required should consist, then, of 40,000 flats and 60,000 cottages, and it will be necessary to extend the city area to provide room for 25,000 of the latter. The city should buy a further 5,000 acres on the southern borders, to be developed as a second satellite garden town.

Regarding land costs in the existing slum belt, the authors are optimistic. They consider that the declining demand for industrial and commercial sites in the inner part of the slum belt will enable the Corporation to acquire the land it needs for rehousing in flats at an average of £3,000 or £4,000 per acre.

The central area is to become "permanently a residential district," with an improved road system, new open spaces, proper sites for schools, and so on. The disadvantages resulting from the existent mixing of factories with houses is stressed, but no detailed zoning of factory areas is attempted in the book, other than as shown in the second map. The authors merely point out

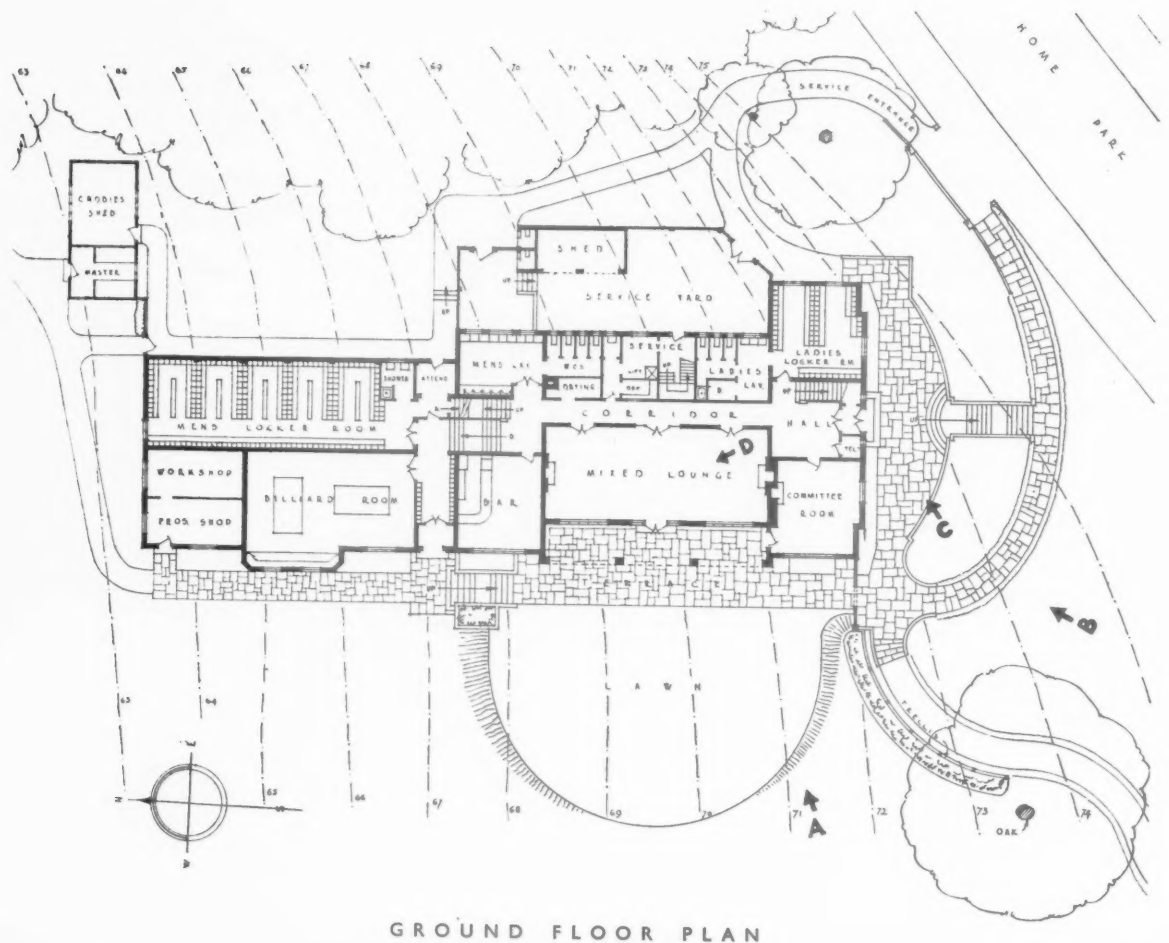
- (1) that there is already some "natural zoning" owing to the tendency for mills and works to be placed in the early days along the canals and railways;
- (2) that there is a tendency for works to move out from the centre of the city to the country;
- (3) that some powers for compulsorily moving old works, subject to reasonable compensation, may have to be included in future Town Planning Acts.

The second of these points does not give rise to any comments on their part, and the authors seem to have given rather little attention to this most important aspect of the large-scale replanning scheme.

## GOLF CLUB HOUSE, WIMBLEDON



*A general view of the club house from point A.*



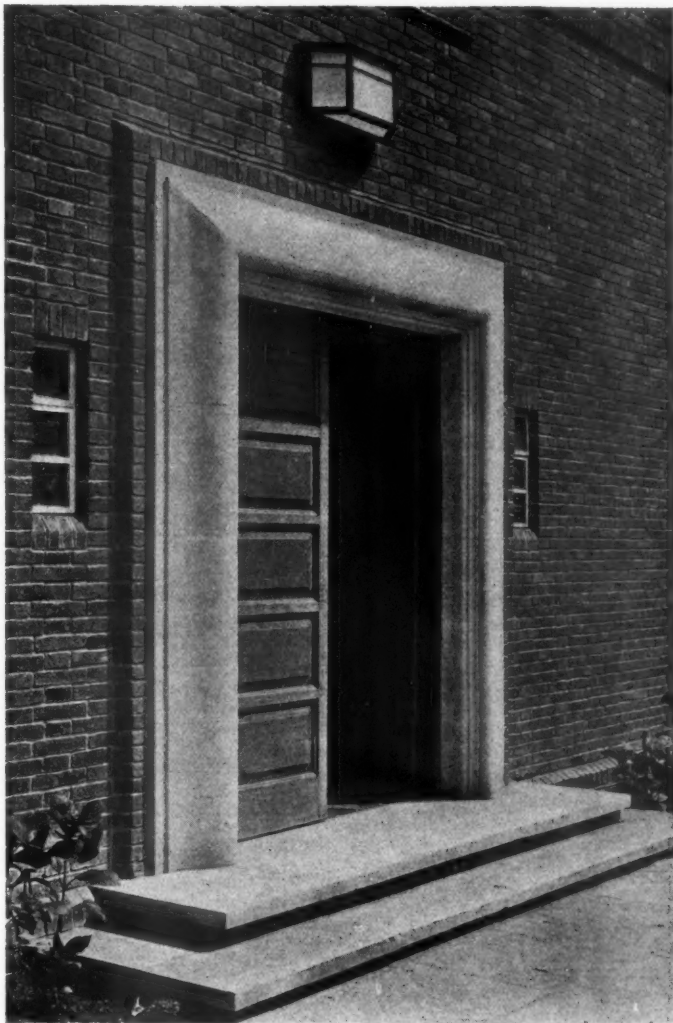
## PARK: DESIGNED BY F. P. M. WOODHOUSE

**SITE.**—The site slopes fairly steeply from south to north, away from the access road, there being a difference in level of more than 10 ft. between the extreme ends of the building. The club house is sheltered on the east by a spinney and there is a fine view of the course and lake from all the club-rooms.

**ELEVATIONS.**—All walls are in 11 in. "golden brown" brickwork. The roof is tiled, and the folding windows are painted cream.

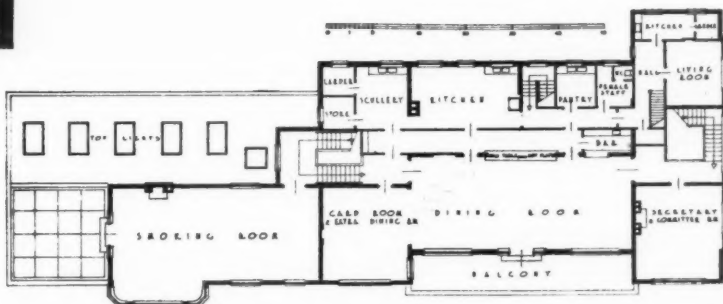
**FINISHES AND EQUIPMENT.**—Oak block floors are used in all the main rooms on the ground floor except the lounge, which is laid in strip for dancing; service areas are floored in linoleum, and cork carpet is used for the dining and smoking rooms on the first floor. Internal finishes generally are cream, with an oak-panelled dining room. The kitchen is all-electric, since current is supplied at an exceptionally cheap rate in the Wimbledon area.

**COST.**—£12,000.



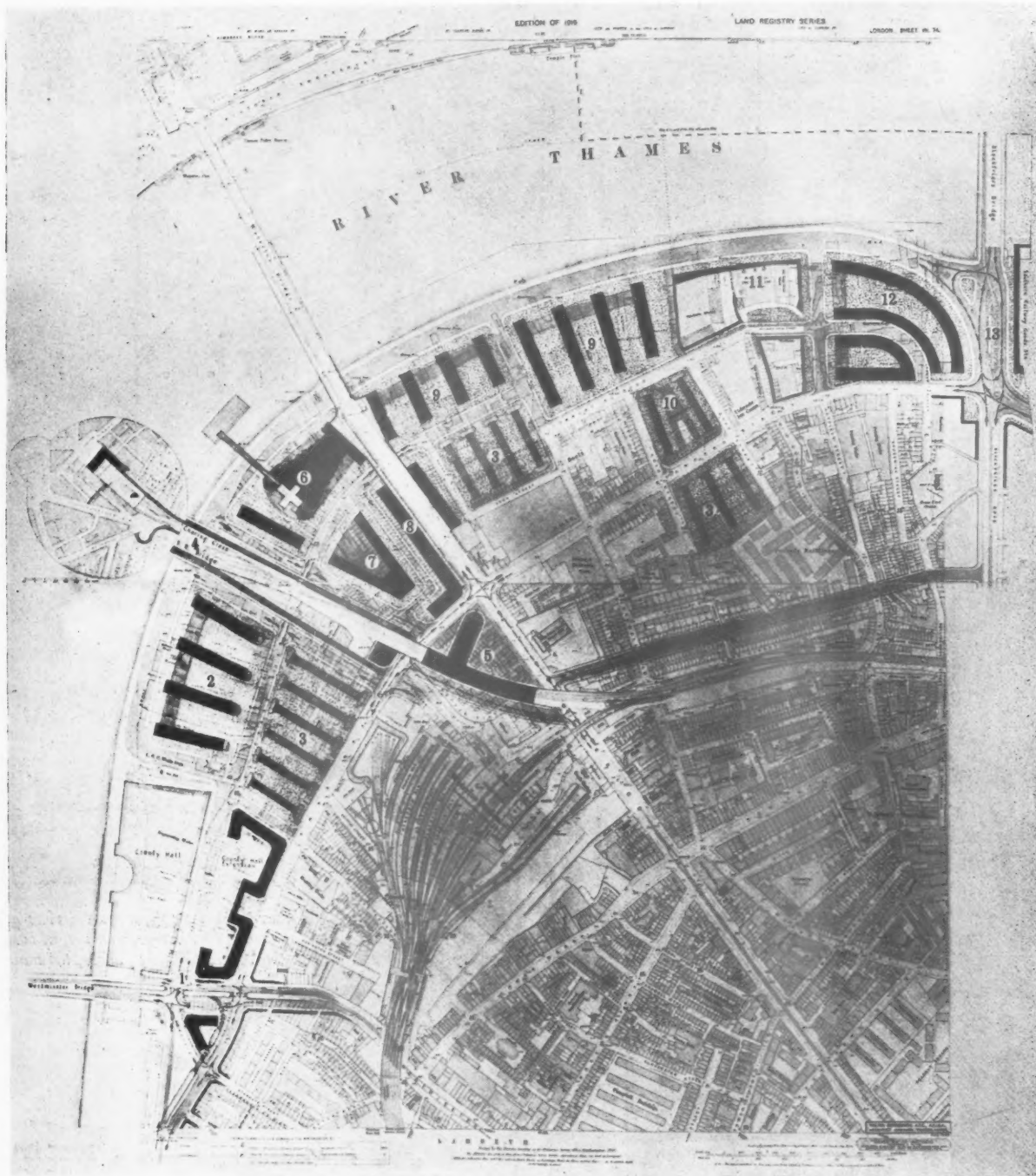
Top left: the main entrance front from point B; left, a general view of the main lounge from D: dado, window seats, bookshelves, etc. are in oak, and the moulded fireplace surround is in Hopton Wood; above, the main entrance doorway from C.

FIRST FLOOR PLAN





## SOUTH BANK OF THE RIVER THAMES:



BASED UPON THE ORDNANCE SURVEY MAP WITH THE SANCTION OF THE CONTROLLER, H.M. STATIONERY OFFICE

The scheme illustrated on this and the four pages following is a continuation of the author's suggestions for the development of Waterloo and Charing Cross Bridges and approaches, published in "The Architects' Journal" for June 14, 1934. The following notes have been supplied by the author:—

Practical limitations that prevent a sweeping planning of the whole area are the existence of a number of buildings of some importance and permanence, such as the Royal Waterloo Hospital, with His Majesty's Stationery Office adjacent; Messrs. Boots' building; the Eldorado Works; Nelson's Wharf; and the Oxo Wharf. These structures, for economic reasons alone, must remain for the time being, although their incorpora-

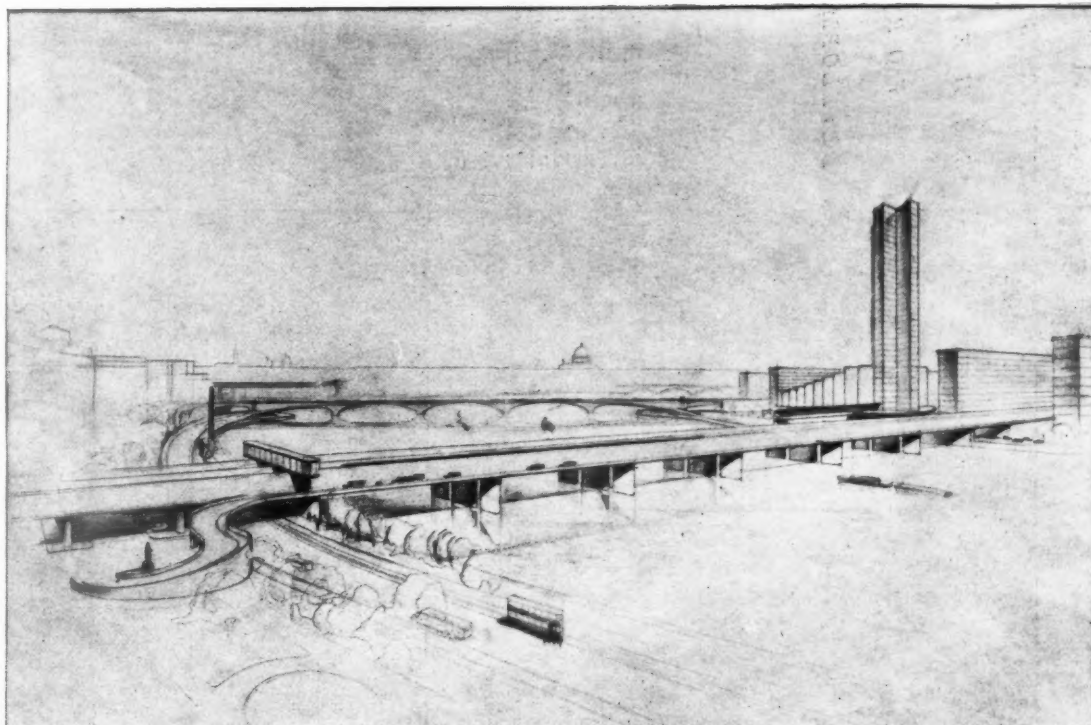
tion in a complete scheme is envisaged at some future date.

A new embankment is suggested extending from County Hall to Blackfriars Bridge and three new traffic circuses are planned: "County Circus" at Westminster Bridge; "Waterloo Circus" at the natural junction of traffic from Waterloo Bridge and a new Charing Cross Bridge; and "Blackfriars Circus."

York Road and Stamford Street are left as existing; Belvedere Road is realigned, but passes under the existing Charing Cross and Waterloo Viaduct arches; Commercial Road is realigned and altered at the eastern end; and Exton, Roupell and Meymott Streets are widened to produce a second traffic connection between "Waterloo Circus" and Blackfriars Road.



## SUGGESTED SCHEME FOR DEVELOPMENT



Following is the key to the plan on the facing page.

DESIGNED BY WALTER GOODESMITH

1 Suggested new "County Circus," in which the problem of the trams is solved by the provision of ramps down to pass under the "Circus," the junction between the two branch lines being effected at the lower level. The suggested new extension to County Hall is also indicated.

2 High public buildings with lower connecting wings and shopping premises at ends of blocks.

3 Housing blocks, five storeys in height. Two-storey high shopping premises are provided at the ends of blocks.

4 The Southern head of Charing Cross Bridge indicating the suggested one-way road bridge each side of the existing railway bridge. In the smaller circle is shown the treatment at the Northern end. Roads connecting the embankment with York Road are also included.

5 Suggested new "Waterloo Circus."

6 At the important "focal" point between Waterloo and Charing Cross bridges a building of public importance is suggested, possibly a new National Theatre, with television tower at one end. The whole block would be connected to a landing stage to facilitate access for "water traffic."

7 A new public swimming pool with health centre, etc.

8 Public or commercial buildings flanking both sides of the widened approach to the new Waterloo Bridge.

9 Further high public buildings or offices with low connecting wings.

10 Two housing blocks are indicated with a small school placed between.

11 The problem of retaining these existing buildings on the waterfront is solved by the addition of a structural bay all round, thus transforming the exterior to harmonize with adjacent new buildings.

12 A more drastic treatment of existing property adjacent to "Blackfriars Circus" is considered necessary. The roads and buildings would therefore be entirely new.

13 The new "Blackfriars Circus." An additional bay to the Railway Goods Station would bring this block into harmony with adjacent buildings. An elongated traffic circus would enable the trams to be isolated in a central grass area with tramway shelter, thus enabling passengers to embark and disembark at this shelter.



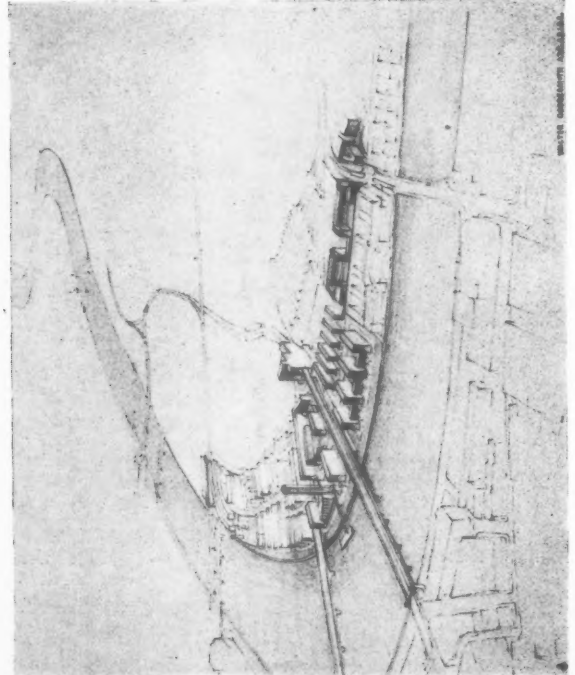
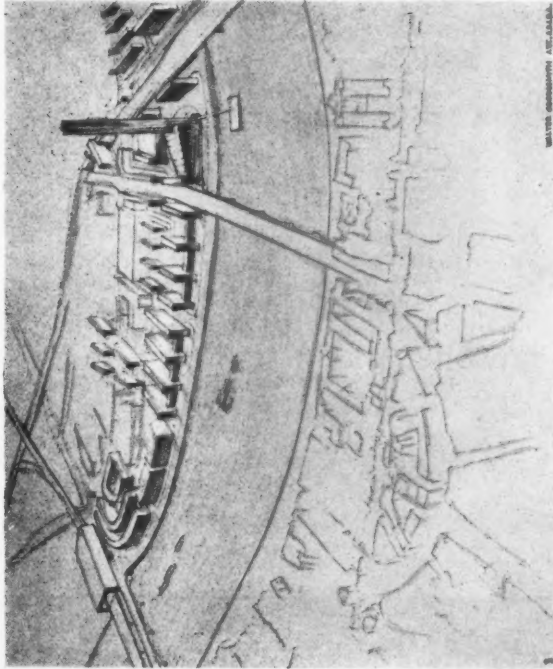
AEROFILMS LTD.

An aerial "plan" photograph of site. Top, situated between Charing Cross Bridge and Waterloo Bridge is the suggested new National Theatre with television tower. To the left the north bound traffic on the new Charing Cross Road Bridge is carried down to Victoria Embankment by the curved viaduct.

S O U T H B A N K O F T H E R I V E R T H A M E S  
S U G G E S T E D  
S C H E M E  
F O R  
D E V E L O P M E N T

*Blackfriars Bridge on the left. Between Waterloo Bridge and Charing Cross Bridge (on the right) is the suggested new National Theatre, with television tower.*

*View of complete scheme between Blackfriars Bridge and Westminster Bridge.*



AERIAL PHOTOGRAPHIC CO.

AERIAL PHOTOGRAPHIC CO.

DESIGNED

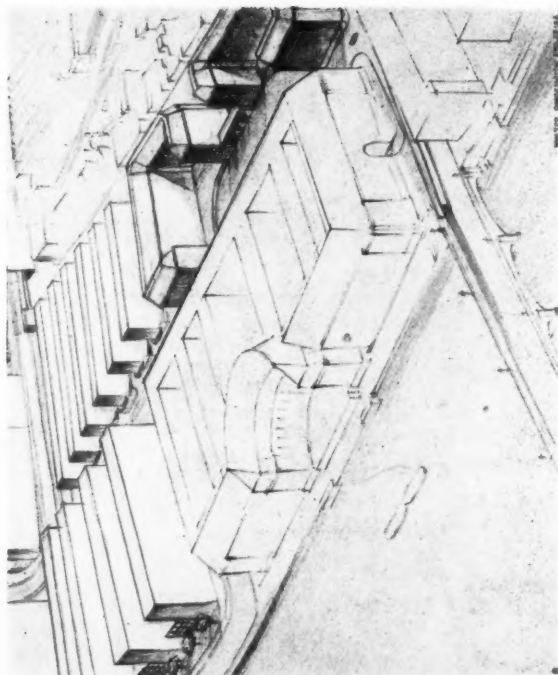
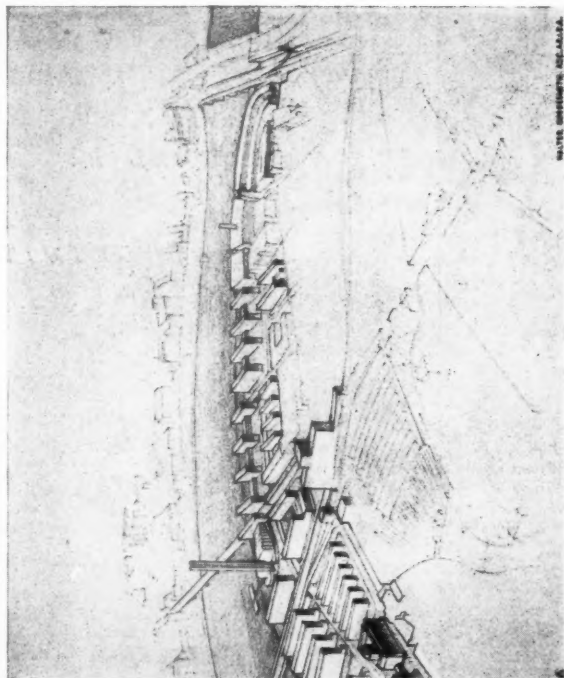
BY

WALTER

GOODESMITH

Blackfriars Bridge on right. The complementary curves of the suggested new buildings and Unilever House on the Victoria Embankment may be noted.

County Hall and its proposed new extension, with tall office blocks connected by lower wings along the suggested embankment, and housing blocks behind.



AEROPILMS LTD.



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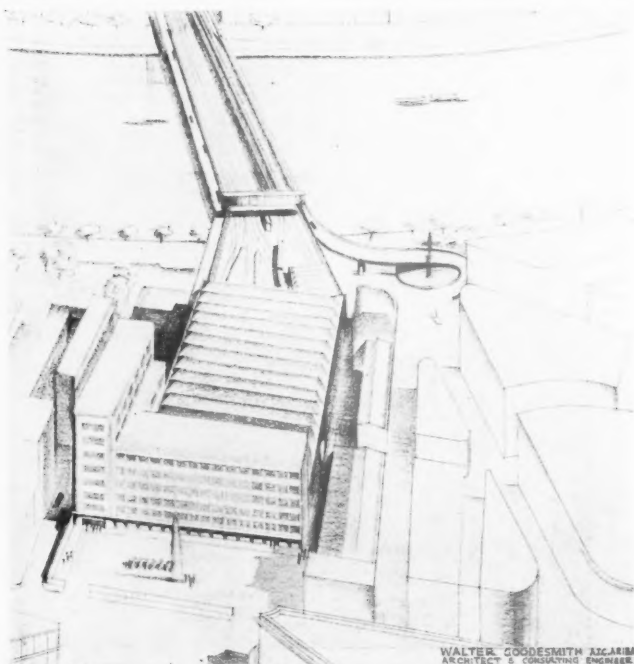
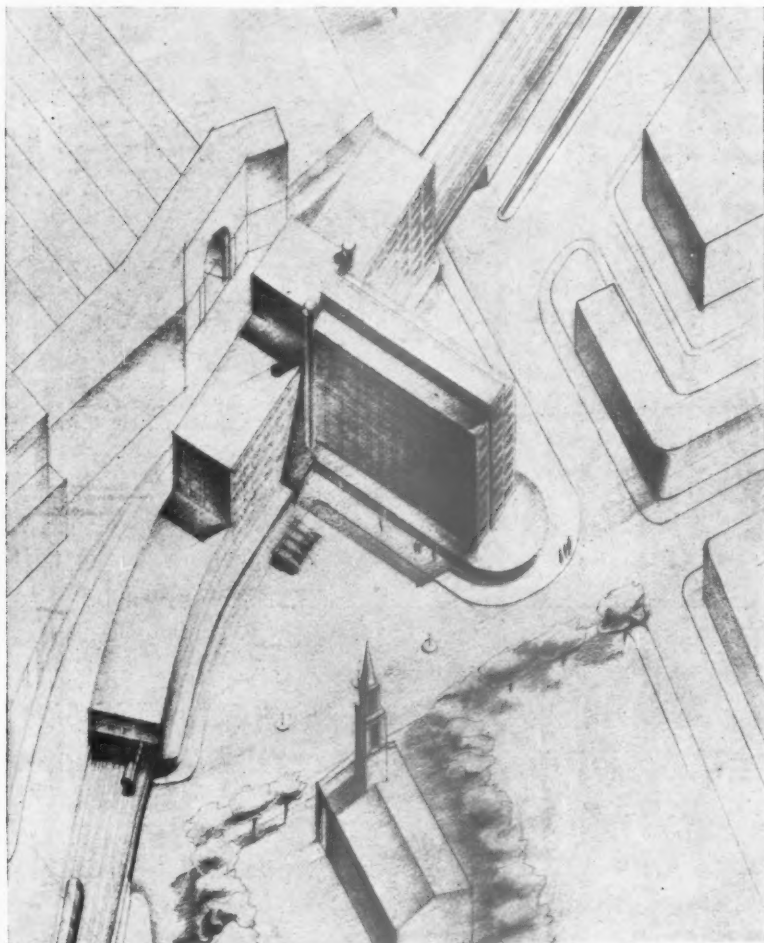


## SOUTH BANK OF THE RIVER THAMES

SUGGESTED SCHEME  
FOR DEVELOPMENT

DESIGNED BY

WALTER GOODESMITH



"Waterloo Circus": At the top (right) is shown the road down (via ramps) from the suggested Charing Cross Road Bridge, with the roadway between York Road and the new embankment placed alongside. On the right (centre) is the widened Waterloo Road connecting with Waterloo Bridge. The railway viaduct in front of Waterloo Station is covered by a suggested building which spans the viaduct. The open spaces in front of this building could be used for car parking. The completion of the proposed new circus would be obtained by widening Mephram Street (which is behind the new building).

The suggested remodelled Charing Cross Station and bridge approaches. The south bound traffic approaches by way of Villiers Street, on the left, whilst the north bound traffic would be carried on to the Victoria Embankment by the curved viaduct.

WALTER GOODESMITH ALCARIA  
ARCHITECT & CONSULTING ENGINEER



# TECHNICAL SECTION: 26

## HEATING, AIR CONDITIONING AND MECHANICAL EQUIPMENT BY OSCAR FABER

O.B.E., D.Sc., M.Inst.C.E., Hon.A.R.I.B.A.,  
A.M.I.E.E., F.C.G.I., M.I.H.V.E., M.Am.S.H.V.E.

AND J. R. KELL, M.I.H.V.E.

### QUANTITY OF HOT WATER REQUIRED FOR VARIOUS TYPES OF BUILDING

TABLE XLVI gives approximately the quantity of hot water which normally has to be provided in various types of building per person:—

- (a) Per day.  
(b) Per hour of maximum draw-off.

#### TYPES OF BOILER FOR HOT WATER SUPPLY

Boilers which are to be suitable for this purpose require as a rule, in addition to all the good points of boilers suitable for heating, to be of such a type as can easily be de-scaled, i.e., to have their interior surfaces accessible for cleaning and the removal of such deposit of scale as may be formed thereon. It has already been explained that in a hot water supply where the water is constantly changing, the incidence of such scaling is very great indeed in comparison with an ordinary heating boiler, where the same water is recirculated and loses any lime and similar deposits the first time it is used, and thereafter continues to circulate without any further deposit being formed. It is, of course, obvious that the importance of this de-scaling will depend chiefly on the hard-

ness of the water used, though the point does not arise with exceptionally soft waters. Such waters are, however, often corrosive in their nature, in which case it would be inadvisable to use an iron boiler in any case unless it is used for the primary circulation in conjunction with a calorifier, in which case any boiler suitable for heating becomes equally suitable for this purpose.

In the case of boilers, however, which are to be used with a water of the ordinary hardness (say 8 deg. of hardness or upwards) without a calorifier (i.e., connected directly to the draw-off mains), it may be said at once that the following types of boilers may be considered suitable:

- (a) Cast Iron Domestic Boilers (see

Fig. 152).—Boilers of this type are generally provided with two or three cleaning covers or mud holes at the top and the bottom, from which de-scaling can be carried out with special tools. It must, however, be admitted that there are portions of the surface which remain difficult of access, and with very hard waters the boiler may need to be replaced after service for ten to twenty years, depending on the hardness of water. The forcing of the boiler makes for greater formation of scale, and it is therefore better to have a boiler of ample size and use it without the need of forcing. This also leads to less clinkering and greater convenience in running generally.

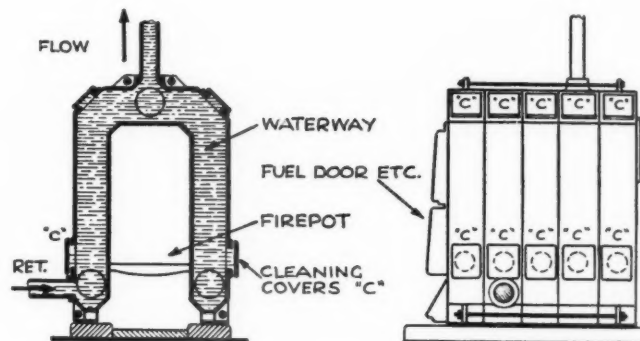
Where dealing with corrosive waters cast iron boilers can be supplied treated by the Bower-Barff process, whereby their resistance to corrosion is enormously increased with certain limitations.

This process consists of heating the iron to a high temperature in the presence of oxygen, whereby the magnetic oxide of iron is produced, which is highly corrosion-resisting.

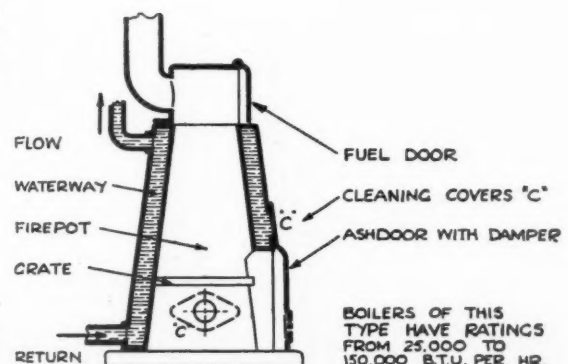
(b) Sectional Cast Iron Boilers (see Fig. 153).—These are only to be recommended for direct hot water supply with hard water when they are of the special type which permits complete de-scaling. For this purpose these boilers are made with large water-

TABLE XLVI  
HOT WATER CONSUMPTION IN VARIOUS TYPES  
OF BUILDING

Type of Building	Consumption per day per occupant in galls. (water at 150° F.)	Peak consumption per hour per occupant in galls.
School (Boarding)	20	4
Block of Flats ..	25 to 35	10
Hotel .. .. .	20 to 30	10
Factory (excluding process work)	4	2
Block of Offices (including cleaning)	5	2
Hospital (Infectious)	50	10
Hospital (Sick) ..	35	7
Hospital (Mental)	25	5



Above: Figure 153. Typical cast iron sectional hot water supply boiler. (Ratings up to 400,000 B.T.U./Hr.)



Right: Figure 152. Typical domestic cast iron boiler.

BOILERS OF THIS TYPE HAVE RATINGS FROM 25,000 TO 150,000 B.T.U. PER HR.

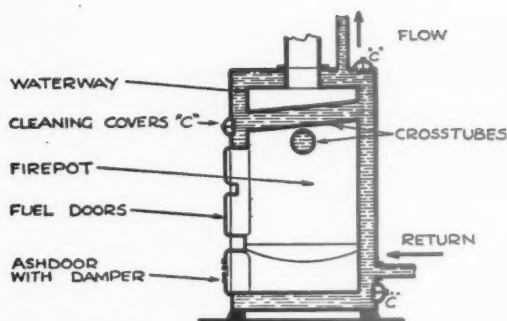


Figure 154. Typical domestic M.S. boiler.

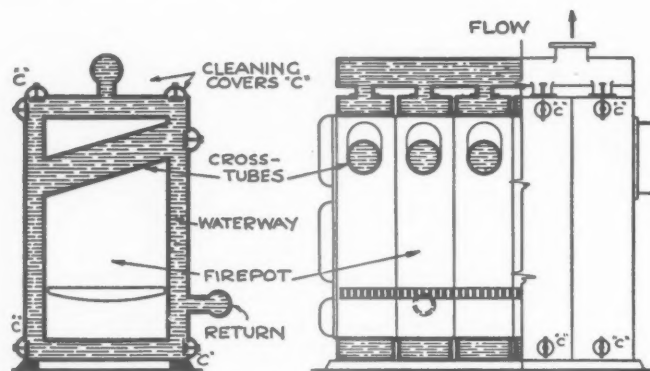


Figure 155. Typical sectional M.S. boiler. (Ratings up to 1,000,000 B.T.U./Hr.)

ways and large cleaning covers top and bottom on both sides. These are indicated in the illustration.

(c) *Mild Steel Domestic Boiler* (see Fig. 154).—Mild steel boilers are suitable for higher pressures than cast iron boilers, but are generally somewhat more expensive. As a rule, a cast iron boiler should not be used for a head of more than 100 ft., while a mild steel boiler can be designed for any head. The relative costs of the two are indicated approximately in Table XLV (see page 210). In corrosive waters, it is sometimes found that cast iron boilers are not so susceptible to corrosion as mild steel boilers, but it depends on the properties of the water. As, however, some types of steel boiler can be treated by the Bower-Barff process, this disadvantage can largely be removed.

Boilers of this type can be combined with a cylinder as a part of the boiler, but, as a rule, it is better to have the cylinder quite independent of the boiler, if only for the reason that failure of the boiler often occurs before that of the cylinder, and the expense involved in replacement is then much reduced.

(d) *Mild Steel Sectional Boiler* (see Fig. 155).—These boilers are made in a great variety of types, and have the advantages over cast iron already mentioned under (c) and need to have the special facilities for descaling already mentioned under paragraph (b). In general, they are more efficient than the plain one-piece steel boilers owing to the better arrangement of the heating surface.

(e) *Larger Boilers*.—The cast iron sectional domestic boiler is generally not suitable for a rating much above 400,000 B.T.U.'s per hour, and the mild steel domestic or mild steel sectional beyond about 1,000,000 B.T.U.'s per hour. Above these sizes, boilers of a different type are generally to be preferred, and steam frequently merits consideration. Such larger boilers may be any of the same types as are suitable for heating by either hot water or steam, and generally for large boilers the use of calorifiers is highly desirable. These boilers have already

been described under the heating section, *q.v.* The same applies to safety valves, mountings, lagging, etc.

*Calorifiers*.—The advantages to be obtained by the use of calorifiers have already been referred to, and relate principally to the greater ease of descaling. The approximate cost of different types is given in Table XLV for various capacities. In corrosive waters, the use of special metals for calorifiers, such as copper, may be a necessity. Such calorifiers sometimes present a difficulty in regard to making the seams watertight, because the caulking which is relied upon for this purpose with steel boilers is not always to be relied upon with soft metals like copper. For this reason, such joints are often treated, after riveting, with tin, brazing or solder.

Great care is, however, to be exercised in the choice of suitable metals for this purpose, as in some cases they set up electrolytic action in conjunction with the copper and produce a corrosive effect which, in some cases, has been known to produce leaking in the calorifier within a few hours of being put into operation. This is, for example, a difficulty which has been experienced with London well water, which contains sodium chloride, sodium sulphate and sodium carbonate. It seems to be held that sodium carbonate is the principal corrosive salt of these three, but the authors would not wish to be dogmatic on this point, as there seems to be some difference of opinion among chemists with regard to this matter.

This difficulty can be avoided by welding the seams so that no second metal is introduced in contact with the copper, and this method appears to be gaining ground for this purpose.

*Rating of H.W.S. Calorifier*.—Apart from the question of the materials of construction, H.W.S. calorifiers are the same in design as those for heating systems. The surface of the heating battery requires an allowance for furring, generally an extra 33 per cent. to 50 per cent. being allowed.

Table XLVII gives the rating of H.W.S. calorifier per sq. ft. of heating surface.

*Rating of H.W.S. Boilers*.—The rating of boilers for hot water supply is different from the rating for heating, because in general the water in the boiler is colder when used for hot water supply than when it is used for heating, and consequently the transmission of heat through the walls of the boiler is greater for each square foot of heating surface. The rating of boilers ought to be considered both in regard to the heating surface, i.e., the number of square feet in contact with hot gases, and also in relation to the grate area, i.e., the number of square feet on which the hot fuel rests and through which air passes to produce combustion.

For commercial reasons, which can easily be understood, the makers of boilers generally rate their products at a high figure which involves certain disadvantages in the convenience and economy of running if these ratings are to be used consistently in practice. It is not suggested that the ratings given in makers' catalogues are ratings which cannot be obtained under test, indeed, it may be admitted at once that the contrary is the case. But in some such tests the fire is kept at its very brightest, the level of the coal in the boiler is kept in the most advantageous position, and the discharge of gases into the flue is at a very high temperature, involving waste. While these conditions can be maintained for a short period during test, it is neither possible nor desirable to maintain them for an extended time in practice. At these high duty conditions the fuel is at a white heat, which produces heavy clinkering and is both uneconomical and inconvenient. For all these reasons it is found to make for far greater efficiency, boiler life and convenience in running if a larger boiler is installed so that it will give the duty required without forcing or unduly frequent attention. There is, therefore, often a marked difference between catalogue ratings and the ratings which should be recommended.

Table XLVIII shows at a glance the approximate basis on which catalogue ratings depend in the case of many well-known types of boilers and also gives the ratings at which these boilers are

recommended for convenient use. It will be seen that the recommended rating is generally about 30 to 40 per cent. less than the corresponding catalogue ratings. For this reason it has in the best practice long been customary, when calculating the boiler capacity required, to add about 33 1/3 per cent. to the capacity required when arriving at the boiler rating to be selected from a catalogue.

Referring to the table, it should perhaps be explained that in the recommended rating table the primary surface means the internal heating surface which is in contact with gases in their first passage through the boiler, i.e., in direct view of the fire, while the secondary surface applies to the surface with which the gases come in contact on their return. These surfaces should be rated at a lower capacity because the gases are much reduced in temperature before they reach these surfaces, which in addition do not receive direct radiation from the fire. Similarly a tertiary surface is the heating surface with which the gases come in contact after they have gone down a boiler and returned and are then returned a third time before passing to the flue.

Simple boilers like cast iron domestic as a rule only have primary surface. Sectional boilers often have primary and secondary, and some boilers return the gases a third time and so have tertiary heating surface. These recommended ratings must, of course, be considered as approximate only, as it is generally possible to force any boiler so that flames are carried right to the flue, in which case the transmission through the tertiary surfaces may be much greater than recommended.

The rating of boilers ought also to be considered in terms of grate area, since a good output from a small grate necessarily involves the use of white hot coal, leading to clinkering. Most catalogue ratings appear to be based on a rating of from 75,000 to 86,000 B.T.U.'s per square foot of grate area. It is, however, recommended that this figure should never exceed 65,000. In the case of the modern magazine type coke boiler, intended to give service without attention for about twenty-four hours, already referred to under the heating section, the grate area is still further increased so as to give a rating not to exceed about 40,000 B.T.U.'s per square foot, and if this figure is maintained it is possible to keep the fire going without serious clinkering with most fuels, which results in great economy in regard to frequency of attention required.

It may be mentioned that, in Table XLV, giving the approximate costs of boilers of various ratings, these are based on catalogue rather than on recommended ratings.

TABLE XLVII: H.W.S. CALORIFIERS.					
RATINGS IN B.T.U.'s PER HR. PER SQ. FT. OF HEATING SURFACE.					
a. WATER - WATER SYSTEMS					
MEAN OF FLOW & RETURN		MEAN TEMPERATURE DIFFERENCE	COEFFICIENT	BTU's / HR. PER SQ. FT.	
PRIMARY	SECONDARY				
140°F	150° - 50°  = 100°F	40°F.	40.0	1,600	
160°		60°	"	2,400	
180°		80°	"	3,200	
200°		100°	"	4,000	
220°		120°	"	4,800	
240°		140°	"	5,600	
b STEAM - WATER SYSTEMS					
MEAN STEAM PRESSURE	STEAM TEMP.	MEAN 2NDARY TEMP.	MEAN TEMP DIFFERENCE	COEFFICIENT	BTU's / HR PER SQ. FT.
0 LBS/sq"	212°F.	150° - 50°  = 100°F	112°F	130.0	14,600
5 "	227°		127°	"	16,500
10 "	240°		140°	"	18,200
20 "	259°		159°	"	20,700
50 "	298°		198°	"	25,700
100 "	337°		237°	"	30,800
150 "	366°	150° - 50° = 100°F	266°	"	34,600
200 "	388°		288°	"	37,500
* THESE COEFFICIENTS ARE FOR PIPE-COIL OR ANNULAR-TYPE CALORIFIER AND INCLUDE 36% ALLOWANCE FOR FURRING					

TABLE XLVIII: H.W.S. BOILERS.				
RECOMMENDED AND CATALOGUE RATINGS IN B.T.U.'s PER HOUR PER SQ. FOOT OF HEATING SURFACE				
TYPE OF BOILER	C.I. DOMESTIC	C.I. SECTIONAL	M.S. DOMESTIC	M.S. SECTIONAL
CATALOGUE RATINGS	11,000	CONTINUOUS USE 8,000. INTERMITTENT USE 11,000.	7,000	6,000
RECOMMENDED RATINGS	7,000	7,000	PRIMARY 7,000 SECONDARY 3,500 TERTIARY 2,000	7,000 3,500 2,000
a HAND-FIRED SOLID FUEL	7,000	7,000	PRIMARY 8,500 SECONDARY 3,500 TERTIARY 2,000	8,500 3,500 2,000
b OIL FUEL OR AUTOMATIC STOKING	8,500	8,500	PRIMARY 8,500 SECONDARY 3,500 TERTIARY 2,000	8,500 3,500 2,000

### The New Housing Survey

Speaking at the Bonar Law College, Ashridge, on August 3, Mr. B. S. Townroe said that local authorities would shortly have to carry out a housing survey affecting many thousands of householders. This duty was laid upon them under the new Housing Act which received Royal Assent on August 2.

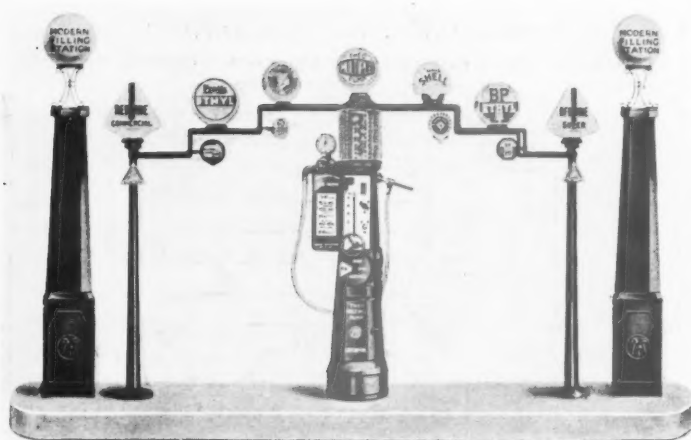
The two Acts, both in operation at the same time, the one for slum clearance and the other planned to reduce overcrowding, would prove a heavy burden, especially on smaller councils with staffs already overworked. Some considered the new Act was born two years before its proper time, but at any rate it was convincing proof of the determination of the National Government to do all in its power to break the back of the many-headed dragon of bad housing conditions.

The first line of attack would be the survey to determine the amount of overcrowding that had to be remedied. Mr. Lloyd George was Prime Minister when the first housing

survey was started sixteen years ago. On August 25, 1919, Dr. Addison, the first Minister of Health, issued a circular calling upon local authorities to make a complete survey of their area and among other points to report on overcrowding. Sir Kingsley Wood, the present Minister of Health, was Parliamentary Private Secretary to Dr. Addison at the time. He would no doubt remember the mistakes that were made in the survey then taken under pressure. There were many instances of bad errors in the figures reported, even as to the number of existing houses, and egregious overlapping, people living in one area and working in another being counted twice.

Sir Kingsley Wood had the choice of two alternatives in carrying out the new housing survey. He could either urge local authorities to appoint a large number of temporary officials to carry out a census at breakneck speed, or else he could insist on the survey being carried out scientifically, on a uniform basis, and providing for the returns to be carefully tabulated and analyzed.





## TRADE NOTES

[BY F. R. S. YORKE, A.R.I.B.A.]

### Petrol Pump

IT is unfortunate that a petrol pump that architects might welcome, because of its potentialities in tidying up the roads, should be advertised by means of the illustration reproduced above.

The pump itself seems ingenious. It is designed to deliver up to six different brands of spirit by means of one pump, whilst it is impossible to serve other than the brand indicated on the dial, regulated to suit the customer's particular requirement. Besides saving considerably in capital outlay, such an apparatus might avoid the confusion of pumps common at most filling stations on the roads.

The pump consists of a cast-iron standard; thick heat-resisting ground glass reservoir with a capacity of five gallons, protected by a metal glazed dome top and cage, and a baffled sliding tube acting as an adjustable measure gauge; this tube determines the

quantity of liquid in the container reservoir, and is worked by a wheel acting on the rack.

There is also a vacuum tube with outlet at the top, inside the reservoir and connected direct to the air suction pump, with a combined meter discharge tap for the evacuation of the liquid in the reservoir. This registers at the same time the exact

quantity delivered by means of a meter fixed inside the meter box casing and fitted with a metal flap.

The suction pump creates a vacuum in the container reservoir, and allows the spirit to enter from the underground storage tank, until it rises a little above the top of the floating measure tube inside the reservoir. By means of a shut-off device, the supply is then automatically cut off, when just above the demanded quantity. All surplus spirit returns to the underground tank through the supply pipe, ensuring correct measure.

The underground tanks are connected to a six-way multiple cock fitted to the base of the pump, enabling the required spirit to be served. If necessary two pumps can be connected to one set of tanks, so that two consumers may be served simultaneously.

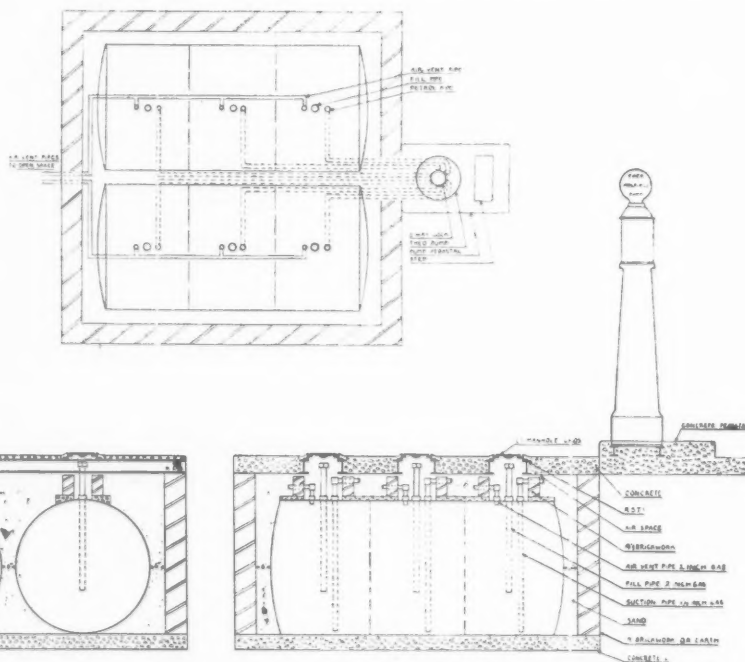
### Effect of Chemicals on Concrete

The North American Joint Committee on Standard Specifications for Concrete and Reinforced Concrete has issued the following revision of the tabulated matter published in 1924 relating to the effects of chemicals on concrete and suggested methods of protection.

### Petroleum Oils

Heavy oils (30 deg. Baumé or heavier).—No effect on unprotected concrete; very slight penetration. No protective treatment recommended.

Light fuel oils (above 30 deg. Baumé).—No effect on unprotected concrete; some loss from penetration. Protective treatment:



The Theo Multiple Petrol Pump. Diagrams show layout of tanks and connections to pumps.



Fluosilicate, spar varnish, linseed oil, sodium silicate.

Volatile oils (kerosene, benzene, naphtha, gasoline).—No effect; considerable loss from penetration. Protective treatment: Fluosilicate, spar varnish, sodium silicate, phenol-formaldehyde varnish.

#### Coal-Tar Distillates

Benzol, toluol, xylol and cumol.—No effect on unprotected concrete; some loss from penetration. Protective treatment: Fluosilicate, sodium silicate, linseed oil, spar varnish.

Phenol, cresol, lysol, creosote, carbolineum.—Slow attack on unprotected concrete. Protective treatment: Fluosilicate, sodium silicate, spar varnish, phenol-formaldehyde varnish.

Pitch, anthracene, carbonzol and paraffin.—No effect.

#### Inorganic Acids

Sulphuric and nitric acids.—Disintegrate concrete. Protective treatment: Glass, vitrified brick or tile laid in litharge, lead and rubber effective to 150 deg. F. and for 50 per cent. solution.

Sulphurous acid.—Disintegrates concrete. Protective treatment: As for sulphuric and nitric acid; rubber for all concentrations.

## THE BUILDINGS ILLUSTRATED

The following is a list of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:—

School at Bournemouth (pages 225-231). General contractors, L. Brown and Sons, Ltd. Sub-contractors: Mathew and Mumby, Ltd., reinforced concrete; S. Howard, bricks; Edward Wood & Co., Ltd., steelwork; Hope's Heating and Lighting, Ltd., heating engineering; Aish & Co., electrical engineering; A. M. Macdougall and Son, flooring; H. W. Cullum & Co., Ltd., soundproof floors; Kennedys, Ltd., and Morrison, Ingram & Co., sanitary engineering; A. Longworth and Sons, Ltd., plumbing; Carter & Co., Ltd., tiles; F. Brown and Son, Ltd., roof tiling; J. and H. Patteson, Ltd., marble work; Empire Stone Co., Ltd., reconstructed stone staircases; A. and S. Wallace, Ltd., plastering; Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt; Jones and Jackson, Ltd., decorating; J. Faulkner and Sons, Ltd., lightning conductor; Henry Hope and Sons, Ltd., metal windows; Birmingham Guild, Ltd., monumental ironwork; Benham and Sons, Ltd., cooking equipment; Aga Heat, Ltd., Aga cooker; Heal and Son, Ltd., furnishing; Alfred Brown & Co., cloakroom fittings; Bennet Furnishing Co., Ltd., school furnishing; F. A. Norris & Co., fire escape staircases; Bournemouth Gas and Water Co., gas and water supplies; Niels Larsen and Son, Ltd., gymnasium apparatus.

Wimbledon Park Golf Club (pages 238-239). General contractors: Robertson and Cameron. Sub-contractors: H. Young & Co., steelwork; Davis, Bennet & Co., sanitary fittings, plumbing, heating and hot water installation; Berkeley Electrical Engineering Co., electric wiring; Bratt Colbran & Co., Ltd., electric radiators, grates and mantels; Best and Lloyd, electric light fittings; Titan Lift Co., service lift; Educational Supply Association, Ltd., sliding windows; W. James & Co., metal casements; Stevens and Adams, Ltd., hardwood floors; Val de Travers, Ltd., asphalt floors; Inlaid Ruboleum Tile Co., cork carpets and lino; Parker, Winder and Achurch, locks and door furniture; Coleford Brick Co., facing bricks; Ames and Finnis, tiles.

## THE WEEK'S BUILDING NEWS

### LONDON & DISTRICTS (15-MILES RADIUS)

**AMERSHAM. School.** The Bucks C.C. is to seek compulsory powers for the acquisition of a site for the erection of a senior School.

**EALING. Flats.** Mr. E. William Parker, architect, has prepared plans for Provincial Modern Estates, Ltd., for the erection of 164 flats off Western Avenue, Ealing.

**GREENFORD. Fire Station.** Ealing Corporation is to obtain tenders for the erection of a fire station at Greenford.

**HARROW. Hall.** Plans have now been approved by the U.D.C. for the proposed erection of a church hall by the Harrow Spiritualist Society. Also for workshops for the unemployed, submitted by Messrs. T. F. Nash.

**HARROW-WEMBLEY. Hospital.** The principle of the establishment of a maternity hospital for Harrow and Wembley with 70 beds, at an approximate cost of £56,000, has now been approved by the two Councils. A combined committee is to be set up, and the most convenient site is to be selected.

**HINCHLEY WOOD. Church.** A new mission hall-church is about to be erected in connection with the Guildford Cathedral and New Churches Fund. The architect is Miss Mary F. Rigg, A.R.I.B.A., Lower Green Road, Esher, Surrey.

**HOUNSLOW. Library.** The Heston-Isleworth T.C. has secured from the Ecclesiastical Commissioners a site in Bath Road for the erection of a branch library.

**HOUNSLOW. Factory.** Mr. F. E. Simpkins, Park Royal Road, N.W.10, is the architect in connection with the proposed erection of a factory at the Great West Road for Siemens-Schuckert (Great Britain), Ltd.

**HOUNSLOW. Shops.** The Heston-Isleworth B.C. has approved plans by Mr. G. Whittaker, A.R.I.B.A., 13, Queen Anne's Gate, S.W.1, for the erection of 15 shops in Kingsland Road and London Road.

**HOUNSLOW. Houses and Shops.** Plans passed by T.C.: Messrs. Bostock and Hollins, 30 houses, off Hyde Lane and Hayes Road; Messrs. Marshall and Tweedy, six shops with flats over, New Heston Road; Mr. J. P. Blake, three shops, High Street; Messrs. G. T. Crouch, Ltd., eight houses, Bath Road.

**HOUNSLOW. Offices, etc.** New stores, offices, garage and messrooms are to be erected at the Electricity Works of the B.C. at an estimated cost of £4,320. Tenders are to be invited.

**RICHMOND. Bridge.** The Surrey C.C. has now approved an expenditure of £80,200 for the widening of Richmond Bridge. This amount includes the fees of the engineer in charge of the scheme, Sir Harley H. Dalrymple-Hay.

**SOUTHALL. Library.** Southall-Norwood U.D.C. is to consider the provision of a central library in association with the proposed new town hall.

**WEALDSTONE. Extensions.** The Harrow U.D.C. has approved plans for proposed additions to be made to the Kodak Works.

### SOUTHERN COUNTIES

**MILFORD. Surgical Theatre, etc.** The Surrey C.C. has agreed to an expenditure of £6,850 for the provision of surgical theatre, X-ray room, lecture and demonstration rooms, and accommodation for eight nurses at the County Sanatorium.

**SLOUGH. Home.** The Bucks C.C. proposes to erect a new nurses' home, containing 20 bedrooms, in the grounds of the Public Assistance Institution, at an estimated cost of £4,400.

**WALTON AND WEYBRIDGE. Houses.** The U.D.C. proposes to erect 56 houses at Hershams and 26 houses at Walton.

**WALTON AND WEYBRIDGE. Extensions.** The U.D.C. has approved in principle a plan for the proposed new Council Chamber and offices extensions. Detailed plans and estimates are to be submitted to the General Purposes Committee.

### SOUTH-WESTERN COUNTIES

**DORCHESTER. School.** The Hants C.C. is to purchase a site at Dorchester for the purpose of a senior school.

**PLYMOUTH. School.** The Education Committee reports that Lady Astor has acquired a site for the provision of a nursery school in Hoe Street.

### EASTERN COUNTIES

**CHELMSFORD. School.** The Education Committee is to erect a school in Princess Road for 720 children.

**MARCH. County Office.** Isle of Ely C.C. is to enlarge the county offices at March at a cost of £14,200.

**OUTWELL. School.** Isle of Ely Education Committee has purchased a site in Church Drive, Outwell, for the erection of a junior school.

### MIDLAND COUNTIES

**NORTHAMPTON. Houses.** The Corporation has requested the borough engineer to prepare a scheme for the erection of a further 200 houses of small type.

### NORTHERN COUNTIES

**BIRKENHEAD. Cinema, etc.** Messrs. Gray and Evans have prepared a scheme for the erection of a cinema, café and 23 shops on the Rake bye-pass road, Birkenhead.

**BIRKENHEAD. Dwellings.** The Corporation has approved plans by the borough engineer for the erection of 75 tenements in Patten Street, 28 in Vernon Place, and 14 in Stuart Road.

**BIRKENHEAD. Church.** The Corporation has sold a site in Prenton Road, for the erection of a church, to the Woodchurch Road Welsh Church Trustees.

**BOLTON. Houses.** The Corporation is to erect 126 houses by direct labour on the Willows estate at a cost of £38,500.

**BOLTON. Nurses' Home.** The Corporation has approved plans for the erection of a new nurses' home and kitchen quarters at the Hulton Lane Hospital.

**MORECAMBE. Houses.** Messrs. Harrison and Moore are to erect 110 houses on the Heatham Hill estate, Morecambe.

**SHEFFIELD. Cinema.** Messrs. Hadfield and Cawkwell have submitted plans to the Sheffield Corporation for the erection of a cinema in Fulwood Road.

**SOUTHPORT. School.** The Education Committee has appointed Mr. Leonard Barnish as architect for the erection of an elementary school at Meols Cop.

**WARRINGTON. Cinema.** Mr. Lewis Morris, Shaftesbury Avenue, London, is to erect a cinema in Barbauld Street, Warrington.

**WARRINGTON. Houses.** The Corporation has approved plans by the borough engineer for 140 houses on the Alder Lane estate, and is to obtain tenders for their erection.

## BUILDING CONTRACTS OPEN

*Unless the contrary is expressly stated, all deposits required for bills of quantities, etc., are returned on receipt of bona-fide tenders. The words "Fair Wages Clause," inserted in certain paragraphs, signify that persons tendering must conform to a fair wages clause in the contract, which requires them to pay the rates of wages current in the district. Application for plans and particulars should be made to the address given at the end of each entry.—ED., A.J.*

### ILFORD: GARAGES AND MORTUARY

August 19.—Erection of garages and mortuary at the Isolation Hospital, Grove Road, Chadwell Heath, Ilford, for the T.C. L. E. J. Reynolds, Borough Engineer, Town Hall, Ilford. Deposit £3 3s.

### SHEFFIELD: ASSEMBLY HALL

August 19.—(1) Erection of assembly hall, manual room, etc., at Marcliffe Intermediate School, and (2) adaptation of premises in Arundel Street for trade school, for the E.C. W. G. Davies, City Architect, Town Hall, Sheffield, 1. Deposit £2 each scheme.

### STEWARTBY: HEATING INSTALLATION, ETC.

August 19.—Installation of heating and hot-water supply for electric lighting and wiring at the Stewartby new Council School for the Bedfordshire C.C. O. F. Milne, 64 Wigmore Street, W.1.

### THROCKLEY: CLINIC AND WELFARE CENTRE

August 19.—Erection of a maternity and child welfare centre and ante-natal clinic at Throckley, for the Newburn (Continued on page xxiv.)

# RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for

labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

		I	II			I	II			I	II
		s. d.	s. d.			s. d.	s. d.			s. d.	s. d.
A <sub>1</sub>	ABERDARE .. S. Wales & M.	1 5	1 0	A <sub>2</sub>	EASTBOURNE .. S. Counties	1 4	1 0	A	Northampton .. Mid. Counties	1 5	1 1
A <sub>1</sub>	Aberdeen .. Scotland	1 6	1 1	A <sub>1</sub>	Ebbw Vale .. S. Wales & M.	1 5	1 0	A	North Staffs .. Mid. Counties	1 5	1 1
A <sub>1</sub>	Abergavenny .. S. Wales & M.	1 5	1 0	A <sub>1</sub>	Edinburgh .. Scotland	1 5	1 1	A	North Shields .. N.E. Coast	1 5	1 1
A <sub>1</sub>	Abingdon .. S. Counties	1 4	1 0	A <sub>1</sub>	E. Glamorgan-shire, Rhondda Valley District	1 5	1 0	A <sub>1</sub>	Norwich .. E. Counties	1 5	1 0
A	Accrington .. N.W. Counties	1 5	1 1	A <sub>2</sub>	Exeter .. S.W. Counties	1 4	1 0	A	Nottingham .. Mid. Counties	1 5	1 1
A	Addlestone .. S. Counties	1 4	1 0	B	Exmouth .. S.W. Counties	1 3	1 1	A	Nuneaton .. Mid. Counties	1 5	1 1
A	Adlington .. N.W. Counties	1 5	1 1								
A	Aldrie .. Scotland	1 5	1 1	A <sub>3</sub>	FELIXSTOWE .. E. Counties	1 4	1 0	A	OAKHAM .. Mid. Counties	1 4	1 0
C	Aldeburgh .. E. Counties	1 1	1 0	A	Filey .. N.W. Counties	1 4	1 0	A <sub>2</sub>	Oldham .. N.W. Counties	1 5	1 1
A	Altrincham .. N.W. Counties	1 5	1 1	A	Fleetwood .. S. Counties	1 5	1 1	A <sub>2</sub>	Oswestry .. N.W. Counties	1 5	1 0
B	Appleby .. N.W. Counties	1 2	1 0	A <sub>1</sub>	Folkestone .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Oxford .. S. Counties	1 5	1 0
A	Ashton-under-Lyne .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Frome .. S.W. Counties	1 2	1 1				
B <sub>1</sub>	Aylesbury .. S. Counties	1 3	1 1	B <sub>2</sub>							
B <sub>1</sub>	BARNBURY .. S. Counties	1 3	1 1	A	GATESHEAD .. N.E. Coast	1 5	1 1	A	PAISLEY .. Scotland	1 5	1 1
B <sub>1</sub>	Bangor .. N.W. Counties	1 3	1 1	B	Gillingham .. S. Counties	1 3	1 1	B	Pembroke .. S. Wales & M.	1 2	1 0
A	Barnard Castle .. N.E. Coast	1 4	1 0	B	Glasgow .. Scotland	1 5	1 1	A <sub>1</sub>	Perth .. Scotland	1 5	1 1
A	Barnsley .. Yorkshire	1 5	1 1	A	Gloucester .. S.W. Counties	1 4	1 0	A <sub>1</sub>	Peterborough .. E. Counties	1 5	1 0
B	Barnstaple .. S.W. Counties	1 3	1 1	A <sub>2</sub>	Goole .. Yorkshire	1 4	1 0	A	Plymouth .. S.W. Counties	1 5	1 1
A	Barrow .. N.W. Counties	1 5	1 1	A <sub>2</sub>	Gosport .. S. Counties	1 4	1 0	A	Pontefract .. Yorkshire	1 5	1 1
A	Barry .. S. Wales & M.	1 5	1 1	A <sub>2</sub>	Grantham .. Mid. Counties	1 4	1 0	A <sub>1</sub>	Pontefract .. Yorkshire	1 5	1 1
A <sub>1</sub>	Basingstoke .. S.W. Counties	1 3	1 1	A <sub>2</sub>	Gravesend .. S. Counties	1 5	1 0	A <sub>2</sub>	Pontypridd .. S. Wales & M.	1 5	1 0
B <sub>1</sub>	Bath .. S.W. Counties	1 4	1 0	A <sub>1</sub>	Greenock .. Scotland	1 5	1 1	A <sub>1</sub>	Portsmouth .. S. Counties	1 4	1 0
A	Batley .. Yorkshire	1 5	1 1	A	Grimsby .. Yorkshire	1 5	1 1	A	Preston .. N.W. Counties	1 5	1 1
A	Bedford .. E. Counties	1 4	1 0	B	Guildford .. S. Counties	1 3	1 1				
A <sub>1</sub>	Berwick-on-Tweed .. N.E. Coast	1 4	1 0					A	QUEENSFERRY .. N.W. Counties	1 5	1 1
A	Bewdley .. Mid. Counties	1 4	1 0	A	HALIFAX .. Yorkshire	1 5	1 1				
B	Bicester .. S. Counties	1 2	1 0	A	Hanley .. Mid. Counties	1 5	1 1	A <sub>1</sub>	READING .. S. Counties	1 4	1 0
A	Birkenhead .. N.W. Counties	1 5	1 1	A	Harrogate .. Yorkshire	1 5	1 1	B	Retford .. Mid. Counties	1 4	1 0
A	Birmingham .. Mid. Counties	1 5	1 1	A	Hartlepool .. N.E. Coast	1 5	1 1	A <sub>1</sub>	Rhondda Valley .. S. Wales & M.	1 5	1 0
A <sub>1</sub>	Bishop Auckland .. N.E. Coast	1 5	1 0	A	Harwich .. E. Counties	1 3	1 1	A	Ripon .. Yorkshire	1 4	1 0
A	Blackburn .. N.W. Counties	1 5	1 1	B <sub>1</sub>	Hatfield .. S. Counties	1 4	1 0	A	Rochdale .. N.W. Counties	1 5	1 1
A	Blackpool .. N.W. Counties	1 5	1 1	B <sub>1</sub>	Hatfield .. S. Counties	1 4	1 0	B	Rochester .. S. Counties	1 3	1 1
A	Blyth .. N.E. Coast	1 5	1 1	B <sub>1</sub>	Hereford .. S.W. Counties	1 3	1 1	A	Ruabon .. N.W. Counties	1 5	1 1
B <sub>1</sub>	Bognor .. S. Counties	1 3	1 1	B <sub>1</sub>	Hertford .. E. Counties	1 4	1 0	A <sub>1</sub>	Rugby .. Mid. Counties	1 5	1 1
A	Bolton .. N.W. Counties	1 5	1 1	A	Heysham .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Rugeley .. Mid. Counties	1 4	1 0
A	Boston .. Mid. Counties	1 4	1 0	A	Howden .. N.E. Coast	1 5	1 1	A	Runcom .. N.W. Counties	1 5	1 1
B <sub>1</sub>	Bournemouth .. S. Counties	1 4	1 0	A	Huddersfield .. Yorkshire	1 5	1 1				
B <sub>1</sub>	Bovey Tracey .. S.W. Counties	1 2	1 0	A	Hull .. Yorkshire	1 5	1 1				
A	Bradford .. Yorkshire	1 5	1 1	A	ILKLEY .. Yorkshire	1 5	1 1	A <sub>1</sub>	ST. ALBANS .. E. Counties	1 5	1 0
A <sub>1</sub>	Brentwood .. E. Counties	1 5	1 0	A	Immingham .. Mid. Counties	1 5	1 1	B	St. Helens .. N.W. Counties	1 5	1 1
A	Bridgend .. S. Wales & M.	1 5	1 1	A <sub>2</sub>	Ipswich .. E. Counties	1 4	1 0	B <sub>1</sub>	Salisbury .. N.W. Counties	1 5	1 1
B	Bridgewater .. S.W. Counties	1 3	1 1	B <sub>2</sub>	Isle of Wight .. S. Counties	1 2	1 1	A	Scarborough .. Yorkshire	1 5	1 1
A <sub>1</sub>	Bridlington .. Yorkshire	1 5	1 0	A	JARROW .. N.E. Coast	1 5	1 1	A	Scunthorpe .. Mid. Counties	1 5	1 1
A	Brighouse .. Yorkshire	1 5	1 1	A	KEIGHLEY .. Yorkshire	1 5	1 1	A	Sheffield .. Yorkshire	1 5	1 1
A	Brighton .. S. Counties	1 4	1 0	A <sub>2</sub>	Kendal .. N.W. Counties	1 4	1 0	A	Shipley .. Yorkshire	1 5	1 1
A	Bristol .. S.W. Counties	1 5	1 1	A <sub>1</sub>	Kewick .. N.W. Counties	1 4	1 0	A <sub>2</sub>	Shrewsbury .. Mid. Counties	1 4	1 0
A	Brixham .. S.W. Counties	1 2	1 0	A <sub>1</sub>	Kettering .. Mid. Counties	1 5	1 0	A <sub>2</sub>	Skipton .. Yorkshire	1 4	1 0
A	Bromsgrove .. Mid. Counties	1 4	1 0	B <sub>1</sub>	Kidderminster .. Mid. Counties	1 4	1 0	A <sub>1</sub>	Slough .. S. Counties	1 4	1 0
B	Bromyard .. Mid. Counties	1 2	1 0	A	King's Lynn .. E. Counties	1 3	1 1	A <sub>1</sub>	Solihull .. Mid. Counties	1 5	1 0
A	Burnley .. N.W. Counties	1 5	1 1	A	LANCASTER .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Southampton .. S. Counties	1 4	1 0
A	Burslem .. Mid. Counties	1 5	1 1	A <sub>1</sub>	Leamington .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Southend-on-Sea .. E. Counties	1 5	1 0
A	Burton-on-Trent .. Mid. Counties	1 5	1 1	A <sub>1</sub>	Leeds .. Yorkshire	1 5	1 1				
A	Bury .. N.W. Counties	1 5	1 1	A	Leek .. Mid. Counties	1 5	1 1	A <sub>1</sub>	Southport .. N.W. Counties	1 5	1 1
A	Buxton .. N.W. Counties	1 5	1 0	A	Leicester .. Mid. Counties	1 5	1 1	A <sub>1</sub>	Stafford .. N.E. Coast	1 5	1 1
				A	Leigh .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Stafford .. N.E. Coast	1 5	1 1
A <sub>1</sub>	CAMBRIDGE .. E. Counties	1 5	1 0	B	Lewes .. S. Counties	1 2	1 0	A	Stirling .. Scotland	1 6	1 1
B <sub>1</sub>	Canterbury .. S. Counties	1 3	1 1	A <sub>2</sub>	Lichfield .. Mid. Counties	1 4	1 0	A	Stockport .. N.W. Counties	1 5	1 1
A	Cardiff .. S. Wales & M.	1 5	1 1	A <sub>1</sub>	Lidbury .. N.W. Counties	1 4	1 0	A	Stockton-on-Tees .. N.E. Coast	1 5	1 1
A	Carlisle .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Llanidno .. S. Wales & M.	1 5	1 1				
B	Cardmarthen .. S. Wales & M.	1 3	1 1	A <sub>1</sub>	Llanelli .. S. Wales & M.	1 5	1 1	A	Stoke-on-Trent .. Mid. Counties	1 5	1 1
B	Carnarvon .. N.W. Counties	1 3	1 1	A	London (12-miles radius) .. Do. (12-miles radius)	1 7	1 2	B	Stroud .. S.W. Counties	1 3	1 1
B	Carmarthen .. N.W. Counties	1 3	1 1	A	Long Eaton .. Mid. Counties	1 5	1 1	B	Sunderland .. N.E. Coast	1 5	1 1
A	Carnforth .. N.W. Counties	1 5	1 1	A	Loughborough .. Mid. Counties	1 5	1 1	A	Swansea .. S. Wales & M.	1 5	1 1
A	Castleford .. Yorkshire	1 5	1 1	A <sub>1</sub>	Luton .. E. Counties	1 5	1 0	A	Swindon .. S.W. Counties	1 4	1 0
A	Chatham .. S. Counties	1 4	1 0	A <sub>1</sub>	Lytham .. N.W. Counties	1 5	1 1				
A	Chelmsford .. E. Counties	1 4	1 0	A <sub>1</sub>	MACCLESFIELD .. N.W. Counties	1 5	1 0				
A	Cheltenham .. S.W. Counties	1 4	1 0	A <sub>2</sub>	Maldstone .. S. Counties	1 4	1 0	A	TAMWORTH .. N.W. Counties	1 5	1 0
A	Chester .. N.W. Counties	1 5	1 1	A <sub>2</sub>	Malvern .. Mid. Counties	1 4	1 0	B <sub>1</sub>	Taunton .. S.W. Counties	1 3	1 1
A	Chesterfield .. Mid. Counties	1 5	1 1	A <sub>1</sub>	Mansfield .. N.W. Counties	1 5	1 1	A	Teeside Dist. .. N.E. Counties	1 5	1 1
B <sub>1</sub>	Chichester .. S. Counties	1 3	1 1	A <sub>1</sub>	Margate .. S. Counties	1 3	1 1	A <sub>2</sub>	Telford .. S.W. Coast	1 4	1 0
A	Chorley .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Matlock .. Mid. Counties	1 4	1 0	A <sub>2</sub>	Tetbury .. Yorkshire	1 5	1 1
B <sub>1</sub>	Cirencester .. S. Counties	1 3	1 1	A <sub>1</sub>	Merthyr .. S. Wales & M.	1 5	1 0	A <sub>1</sub>	Torquay .. S.W. Counties	1 5	1 0
A	Clinthorpe .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Middlesbrough .. N.E. Coast	1 5	1 1	B <sub>2</sub>	Turso .. S.W. Counties	1 2	1 1
A	Clydebank .. Scotland	1 5	1 1	A <sub>1</sub>	Middlewich .. N.W. Counties	1 4	1 0	A <sub>1</sub>	Tunbridge Wells .. S. Counties	1 4	1 0
A	Coalville .. Mid. Counties	1 5	1 1	A <sub>1</sub>	Minehead .. S.W. Counties	1 2	1 1	A	Tunstall .. Mid. Counties	1 5	1 1
A	Colchester .. E. Counties	1 4	1 0	B <sub>1</sub>	Monmouth .. S. Wales & M.	1 2	1 1	A	Tyne District .. N.E. Coast	1 5	1 1
A	Colne .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Morecambe .. N.W. Counties	1 5	1 1				
A	Colwyn Bay .. N.W. Counties	1 4	1 0	A <sub>2</sub>	Morecambe .. N.W. Counties	1 5	1 1				
A	Consett .. N.E. Coast	1 5	1 0	A <sub>2</sub>	Mossley .. S. Counties	1 4	1 0	A	WAKEFIELD .. Yorkshire	1 5	1 1
A	Conway .. N.W. Counties	1 4	1 0	A <sub>2</sub>	Marlborough .. N.W. Counties	1 4	1 0	A	Walsall .. Mid. Counties	1 5	1 1
A	Coventry .. Mid. Counties	1 5	1 1	A <sub>1</sub>	Mansfield .. N.W. Counties	1 5	1 1	A	Warrington .. N.W. Counties	1 5	1 1
A	Crewe .. N.W. Counties	1 4	1 0	A <sub>1</sub>	Margate .. S. Counties	1 3	1 1	A <sub>1</sub>	Warwick .. Mid. Counties	1 5	1 0
A	Cumberland .. N.W. Counties	1 4	1 0	A <sub>1</sub>	Matlock .. Mid. Counties	1 4	1 0	A <sub>1</sub>	Wellingborough .. Mid. Counties	1 5	1 1
				A <sub>1</sub>	Merthyr .. S. Wales & M.	1 5	1 0	A <sub>2</sub>	West Bromwich .. Mid. Counties	1 5	1 1
A	DARLINGTON .. N.E. Coast	1 5	1 1	A <sub>1</sub>	Middlesbrough .. N.E. Coast	1 5	1 1	A <sub>2</sub>	Weston-a-Mare .. W. Counties	1 4	1 0
A	Darwen .. N.W. Counties	1 5	1 1	A <sub>2</sub>	Middlewich .. N.W. Counties	1 4	1 0	A <sub>2</sub>	Whitby .. Yorkshire	1 4	1 0
B <sub>1</sub>	Deal .. S. Counties	1 3	1 1	A <sub>2</sub>	Minehead .. S.W. Counties	1 2	1 1	A	Widnes .. N.W. Counties	1 5	1 1
A	Denbigh .. N.W. Counties	1 4	1 0	B <sub>1</sub>	Monmouth .. S. Wales & M.	1 2	1 1	A	Wigan .. N.W. Counties	1 5	1 1
A	Derby .. Mid. Counties	1 5	1 1	A <sub>1</sub>	Morecambe .. N.W. Counties	1 5	1 1	B	Winchester .. S. Counties	1 3	1 1
A	Dewsbury .. Yorkshire	1 5	1 1	A <sub>1</sub>	Morecambe .. N.W. Counties	1 5	1 1	A	Windsor .. S. Counties	1 4	1 0
B	Didcot .. S. Counties	1 3	1 1	A <sub>1</sub>	Morecambe .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Wolverhampton .. Mid. Counties	1 5	1 1
A	Doncaster .. Yorkshire	1 5	1 1	A <sub>1</sub>	Morecambe .. N.W. Counties	1 5	1 1	A <sub>2</sub>	Workeston .. Yorkshire	1 4	1 0
B <sub>1</sub>	Dorchester .. S.W. Counties	1 3	1 1	A <sub>1</sub>	Morecambe .. N.W. Counties	1 5	1 1	A <sub>1</sub>	Wyke .. N.W. Counties	1 5	1 1
A	Driffield .. Yorkshire	1 4	1 0	A <sub>1</sub>	Morecambe .. N.W. Counties	1 5	1 1	A	Wycombe .. S. Counties	1 4	1 0
A	Droitwich .. Mid. Counties	1 4	1 0	A <sub>1</sub>	Morecambe .. N.W. Counties	1 5	1 1				
A	Dudley .. Mid. Counties	1 5	1 1	A	NANTWICH .. N.W. Counties	1 4	1 0	B	YARMOUTH .. E. Counties	1 3	1 1
A	Dumfries .. Scotland	1 5	1 1	A	Neath .. S. Wales & M.	1 5	1 1	E	Yeovil .. S.W. Counties	1 3	1 1
A	Dundee .. Scotland	1 5	1 1	A	Nelson .. N.W. Counties	1 5	1 1	A	York .. Yorkshire	1 5	1 1
A	Durham .. N.E. Coast	1 5	1 1	A	Newcastle .. N.E. Coast	1 5	1 1				
				A	Newport .. S. Wales & M.	1 5	1 1				
				A	Normanton .. Yorkshire	1 5	1 1				

\* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request.

White lead in 1 cwt. casks	.. cwt.	2	8	6
Linseed oil	.. gall.	2	3	
Boiled oil	.. "	2	9	
Turpentine	.. "	4	1	
Patent knotting	.. "	1	0	
Distemper, washable	.. cwt.	2	6	0
" ordinary	.. "	2	0	0
Whitening	.. "	4	0	0
Size, double	.. skin	3		
Copal varnish	.. gall.	1	0	0
Flat varnish	.. "	1	4	0
Outside varnish	.. "	1	6	0
White enamel	.. "	1	15	0
Red mixed paint	.. "	1	3	0
Runywick black	.. "	6		



# CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and

profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

## EXCAVATOR AND CONCRETOR

	£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	2	9
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	8	6
" to form basement n/e 5' 0" and cart away	"	9	0
" " 10' 0" deep and cart away	"	9	6
" " 15' 0" deep and cart away	"	10	0
If in stiff clay	add	"	6
If in underpinning	"	4	0
Planking and strutting to sides of excavation	F.S.	1	0
" to pier holes	"	5	"
" to trenches	"	5	"
" extra, only if left in	"	3	"
Hardcore, filled in and rammed	Y.C.	10	0
Portland cement concrete in foundations (6-1)	"	1	6
" " (4-2-1)	"	1	6
" " underpinning	"	1	6
Finishing surface of concrete, space face	Y.S.	7	"

## DRAINLAYER

	£	s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6
Extra, only for bends	Each	2	8
" junctions	"	3	9
Gullies and gratings	"	16	6
Cast iron drains, and laying and jointing	F.R.	4	9
Extra, only for bends	Each	10	6

## BRICKLAYER

	£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	26	10
" " in cement	"	27	12
" " Blues in cement	"	34	0
Extra only for circular on plan	"	2	0
" backing to masonry	"	1	10
" raising on old walls	"	2	0
" underpinning	"	5	10
Fair Face and pointing internally	F.S.	1	1
Extra over fletton brickwork for picked stock facings and pointing	"	8	"
" " " red brick facings and pointing	"	11	"
" " " blue brick facings and pointing	"	1	4
" " " glazed brick facings and pointing	"	3	6
Tuck pointing	"	7	"
Weather pointing in cement	"	3	"
Slate dampcourse	"	10	"
Vertical dampcourse	"	1	1

## ASPHALTER

	£	s.	d.
Horizontal dampcourse	Y.S.	4	6
Vertical dampcourse	"	6	9
" paving or flat	"	4	0
" paving or flat	"	5	6
1" x 6" skirting	F.R.	1	0
Angle fillet	"	2	"
Rounded angle	"	2	"
Cesspools	Each	5	0

## MASON

	£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	17	9
Bath stone and do., all as last	"	13	6
Artificial stone and do	"	13	0
York stone templates, fixed complete	"	10	6
" thresholds	"	13	6
" sills	"	1	0

## SLATER AND TILER

	£	s.	d.
Slatting, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" x 10"	Sqr.	3	10
Do., 18" x 9"	"	3	7
Do., 24" x 12"	"	3	17
Westmorland slating, laid with diminished courses	"	6	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	3	0
Do., all as last, but of machine-made tiles	"	2	16
20" x 10" medium Old Delabole slating, laid to a 3" lap (grey)	"	2	16
" " " (green)	"	4	15

## CARPENTER AND JOINER

	£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	6
Shuttering to sides and soffits of beams	F.S.	7	"
" to staircases	"	7	"
Fir and fixing in wall plates, lintols, etc.	F.C.	1	6
Fir framed in floors	"	3	9
" " roofs	"	4	6
" " trusses	"	7	6
" " partitions	"	8	6
1" deal sawn boarding and fixing to joists	Sqr.	1	14
1 1/2" " " " "	"	1	17
1 1/2" x 2" fir battening for Countess slating	"	2	3
Do. for 4" gauge tiling	"	9	6
Stout feather-edged tilting fillet	F.R.	12	0
Patent inodorous felt, 1 ply	Y.S.	2	3
" " 2" "	"	2	9
" " 3" "	"	3	3
Stout herringbone strutting to 9" joists	F.R.	10	6
1" deal gutter boards and bearers	F.S.	1	2
1 1/2" " " " "	"	1	6
2" deal wrought rounded roll	F.R.	8	"
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	10
1 1/2" do.	"	2	10
1 1/2" do.	"	2	17
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1	6
1 1/2" do.	"	1	9

## CARPENTER AND JOINER—continued

	£	s.	d.
1 1/2" deal moulded sashes of average size	F.S.	1	9
" " " "	"	1	11
1 1/2" deal cased frames double hung, of 6" x 3" oak sills, 1 1/2" pulley stiles, 1 1/2" heads, 1" inside and outside linings, 3/4" parting beads, and with brass faced axle pulleys, etc., fixed complete	"	3	7
" " " "	"	3	10
Extra only for moulded horns	Each	"	"
1 1/2" deal four-panel square, both sides, door	F.S.	2	0
" " but moulded both sides	"	2	8
" " " "	"	3	0
4" x 3" deal, rebated and moulded frames	F.R.	1	0
4 1/2" x 3 1/2" " " "	"	1	4
1 1/2" deal tongued and moulded window board, on and including deal bearers	F.S.	1	9
1 1/2" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	2	6
1 1/2" deal moulded wall strings	"	2	1
" " outer strings	"	2	4
Ends of treads and risers housed to string	Each	1	9
3" x 2" deal moulded handrail	F.R.	1	3
1" x 1" deal balusters and housing each end	Each	2	0
1 1/2" x 1 1/2" " " "	"	2	9
3" x 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	"	6	0

## SMITH AND FOUNDER

	£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.	16	6
Riveted plate or compound girders, and hoisting and fixing in position	"	1	0
Do., stanchions with riveted caps and bases and do.	"	19	0
Mild steel bar reinforcement, 1/2" and up, bent and fixed complete	"	17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	"	"
Wrought-iron caulked and cambered chimney bars	Per cwt.	1	10

## PLUMBER

	£	s.	d.
Milled lead and labour in flats	cwt.	1	15
Do. in flashings	"	1	19
Do. in covering to turrets	"	2	6
Do. in soakers	"	1	11
Labour to welded edge	F.R.	3	6
Open copper nailing	"	3	"
Close	"	4	"
Lead service pipe and fixing with pipe books	s. d.	10	10
Do. soil pipe and fixing with cast lead tacks	"	1	3
Extra, only to bends	Each	6	4
Do. to stop ends	"	8	9
Boiler screws and unions	"	3	3
Lead traps	"	3	9
Screw down bib	"	5	0
valves	"	8	0
Do. stop cocks	"	6	3
4" cast-iron 1/2-rd. gutter and fixing	"	9	6
Extra, only stop ends	"	12	6
Do. angles	"	"	"
Do. outlets	"	"	"
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do. for plain heads	"	5	6

## PLASTERER AND TILING

	£	s.	d.
Expanded metal lathing, small mesh	Y.S.	2	0
Do. in n/w to beams, stanchions, etc.	"	2	9
Lathing with sawn laths to ceilings	"	1	3
1/2" screeding in Portland cement and sand or tiling, wood block floor, etc.	"	1	5
Do. vertical	"	1	7
Rough render on walls	"	1	2
Render, float and set in lime and hair	"	1	9
Render and set in Sirapite	"	1	11
Render, backing in cement and sand, and set in Keene's cement	"	2	9
Extra, only if on lathing	"	4	"
Keene's cement, angle and arris	F.R.	6	"
Arris	"	"	"
Rounded angle, small	"	3	"
Plain cornices in plaster, including dubbing out, per 1" girth	"	1	1
1" granolithic pavings	Y.S.	3	6
1 1/2" x 6" white glazed wall tiling and fixing on prepared screed	"	4	6
9" x 3" " " "	"	17	6
Extra, only for small quadrant angle	F.R.	1	2

## GLAZIER

	£	s.	d.
21 oz. sheet glass and glazing with putty	F.S.	6	"
26 oz. do. and do.	"	7	"
Flemish, Arctic Figured (white) and glazing with putty	"	1	1
Cathedral glass and do.	"	1	2
Glazing only, British polished plate	"	7	"
Extra, only if in beads	"	2	"
Washleather	F.R.	4	"

## PAINTER

	£	s.	d.
Clearcolle and whiten ceilings	Y.S.	5	"
Do. and distemper walls	"	9	"
Do. with washable distemper	"	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	"	2	0
Hanging ordinary paper	from	2	9



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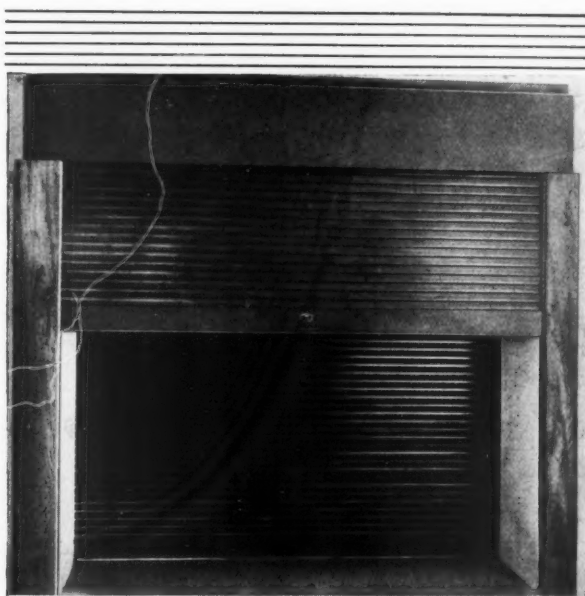


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36-38 Victoria St., Westminster, S.W.1.

**Building Contracts Open**—(Continued from page 249).  
U.D.C. Surveyor, Council Offices, Newburn, Northumberland. Deposit £2 2s.

**CROMER: HOSPITAL**  
August 20.—The Cromer and District Hospital Management Committee invites tenders for erection of additions to the Hospital. R. Croome, Secretary, The Hospital, Cromer. Deposit £2.

**WEST HAM: ELECTRICITY SUB-STATION**  
August 20.—Erection of an electricity sub-station building at City Mills, High Street, Stratford, E.15, for the B.C. W. L. Jenkins, Borough Engineer, Town Hall, West Ham, E.15. Deposit £1.

**NEATH: HOUSES**  
August 21.—Erection of non-parlour type houses, as follows, for the R.D.C.:—(1) Proposed six houses at Clyne; (2) proposed 28 houses at Bryncoch. The engineer, J. T. Jones, Council Offices, Orchard Street, Neath. Deposit £2 2s. each scheme.

**BURNWOOD: HOUSES**  
August 22.—Erection of 10 houses in Springhill Road, Burnwood, for the Lichfield R.D.C. The Surveyor, Rural Council House, Lichfield.

**BASINGSTOKE: HOUSES, ETC.**  
August 23.—Erection of houses and construction of roads and sewers and other works at South Ham, Worthing Road, for the T.C.: Contract (a)—52 houses, and contract (b)—road and sewer works. G. F. Paget, architect, Municipal Buildings, Basingstoke. Deposit £3 3s. each contract.

**BELFAST: SCHOOL**  
August 23.—Erection of Edenderry P.E. School, Tennent Street. Education Architect, Victoria Street, Belfast. Deposit £2 2s.

**BIRR: TECHNICAL SCHOOL**  
August 23.—The Offaly Vocational Education Committee invites tenders for building a new technical school in Birr. The Vocational Education Committee's Offices, Technical School, Tullamore. Deposit £3 3s.

**CHIPPING SODBURY: HOUSES**  
August 23.—Erection of 28 houses on the Gaunt's Field housing site, Green Lane, Chipping Sodbury, for the Sodbury R.D.C. H. C. James, Housing Supervisor, Council Offices, Chipping Sodbury. Deposit £1.

**DONCASTER: GOVERNMENT CONTRACTS**  
August 23, etc.—The Commissioners of Works, etc., invite tenders, before 11 a.m. on (1) August 23, for erection of an Employment Exchange at Doncaster (drawings, etc., on view at the Employment Exchange, Trafford Street, Doncaster); (2) August 23, for erection of a garage at Bridgend Post Office (drawings, etc., on view at the Head Post Office, Bridgend); (3) August 21, for erection of an Employment Exchange at Nottingham (drawings, etc., on view at the Head Post Office, Leicester); (4) August 21, for erection of a Telephone Exchange at Market Harborough (drawings, etc., on view at the Head Post Office, Leicester); (5) August 20, for erection of an Employment Exchange at Felling (drawings, etc., on view at the Employment Exchange, New Bridge Street, Newcastle-on-Tyne); (6) August 16, for

erection of a Post Office at Chester-le-Street, Co. Durham (drawings, etc., on view at the Post Office, Chester-le-Street). Room 65D, Third Floor, H.M. Office of Works, London, S.W.1. Deposit £1 in each case.

**BRISTOL: HOUSES**  
August 24.—Erection of the following houses, for the Housing Committee:—18 houses, Hillside Road, housing site, St. George. The City Engineer, Housing Department, 51 Prince Street, Bristol. Deposit £1.

**HOLYHEAD: HOUSES**  
August 24.—Erection of 51 houses on the undermentioned sites, for the U.D.C.: North-y-felin Road site, 22 houses; Mill Bank, 12; Porthdafarch Road, 10; and Breakwater View, seven. The Engineer and Surveyor, Town Hall, Holyhead. Deposit £2 2s.

**WALSALL: SHOWROOMS**  
August 24.—Additions to showrooms, Upper Bridge Street, consisting of an additional storey over the present showrooms, for the T.C. Town Clerk, Council House, Walsall. Deposit £3 3s.

**CLATTERBRIDGE: NURSES' HOME**  
August 26.—The Wirral Joint Hospital Board invites tenders for a nurses' home and cubicle block at the Isolation Hospital, Clatterbridge, Bebington. Campbell and Honeyburne, Bluecoat Chambers, School Lane, Liverpool. Deposit £1 1s.

**COOLE PILATE: FARM BUILDINGS**  
August 26.—Alteration and sub-division of the existing farm buildings at Brinepits Farm, Coole Pilate, near Nantwich, for the Cheshire C.C. M. T. Hedley, County Land Agent, 16 Nicholas Street, Chester. Deposit £1 1s.

**EPPING: HOUSES**  
August 26.—Erection of 28 houses on the following sites, for the U.D.C.: 12 at Shaftesbury Road; 16 at Ivy Chimneys. H. J. Mead, Hawthorn Lodge, 91 High Street, Epping. Deposit £2 2s.

**MABLETHORPE: HOUSES**  
August 26.—Erection of 12 houses (eight at Mablethorpe and four at Sutton-on-Sea), for the U.D.C. A. E. Baker, Engineer and Surveyor, Council Offices, Mablethorpe. Deposit £2 2s.

**WILKINS: VARIOUS**  
August 26.—The following for the C.C.: Erection of wooden sports pavilion at Hensworth Grammar School; installation of low-pressure hot-water apparatus and electric lighting at the Normanston new Senior School; and whole or separate trades in connection with the adaptation of the Miners' Welfare Institute, Halfpenny Lane, Pontefract, as a junior instruction centre. Trades—builder, joiner, plumber. The Education Officer, County Hall, Wakefield.

**WILKESDEN: HOSPITAL**  
August 26.—Erection of a new observation ward block and incidental works at the Municipal Hospital, Brentfield Road, N.W.10, for the T.C. F. Wilkinson, Town Hall, Dyne Road, N.W.6. Deposit £10 10s.

**CHAGFORD: SCHOOL**  
August 28.—Erection of a new senior Council school at Chagford, for the Devon County E.C. H. V. de Courcy Hague, County Architect, 97 Heavitree Road, Exeter. Deposit £2 2s.

#### BARNLEY: HOUSE

August 31.—Erection of a house at Midhope Reservoir, near Langsett, for the T.C. Waterworks Office, Town Hall, Barnley. Deposit £1 1s.

#### BIRKENHEAD: DWELLINGS

August 31.—Separate tenders for erection of 75 three-storey tenements, Patten Street; 28 four-storey tenements, Vernon Place; and 14 two-storey tenements, Stuart Road, for the T.C. B. Robinson, Borough Engineer, Town Hall, Birkenhead. Deposit £1 1s.

#### GELLYGEAR: HOSPITAL

August 31.—Hospital extensions, for the U.D.C.: (a) Additions to the administrative block; (b) a new ward pavilion. F. Read, Council Offices, Hengoed, Glam. Deposit £3.

#### WALLINGTON: LIBRARY

September 2.—Erection of a library at Woodcote Road, Wallington, for the Bedlington and Wallington U.D.C. S. F. R. Carter, Engineer and Surveyor, Council Offices, Woodcote Road, Wallington, Surrey. Deposit £3 3s.

#### DARTMOUTH: CHILD WELFARE CENTRE

September 2.—Erection of a child welfare centre, County Architect, 97 Heavitree Road, Exeter.

#### SPRINGFIELD: POLICE HEADQUARTERS

September 2.—The Essex Standing Joint Committee invites tenders for additions to living quarters and new garages at the Police Headquarters, Springfield, Chelmsford. Captain Peel, Chief Constable, Police Headquarters, Springfield, Chelmsford. Deposit £2 2s.

#### ACTON: SCHOOL

September 24.—Erection of the West Acton School, for Acton B.C. W. G. Cross, M.Inst.C.E., Borough Engineer, Municipal Offices, Acton, London, W.3. Deposit £2 2s.

## TENDERS ACCEPTED

**Bolton: School.**—Erection of an elementary school at Topbrow for the Bolton Education Committee. Messrs. J. and N. Dickinson, Ltd.

**Durham: Baths.**—Extension to Horden pithead baths, Durham. Messrs. Dixon, Elliot and Sons.

**Eastbourne: Houses.**—Erection of 78 houses on the Northborne estate for the Eastbourne Corporation. Messrs. J. H. Thomson and Sons, Ltd., Grimsby.

**Plymouth: Nurses' Home.**—Erection of a nurses' home at the city hospital for the Plymouth Corporation. Messrs. Wakeman Bros., Ltd.

**Sheffield: Houses.**—Erection of 348 houses on the Arbourthorne estate for the Sheffield Corporation. Messrs. R. Charlesworth, Ltd. Erection of 310 houses on the Arbourthorne estate for the Sheffield Corporation. Messrs. M. J. Gleeson, Ltd.

**Wolverhampton: School.**—Extension at Red Cross Street school for the Wolverhampton Education Committee. Messrs. H. J. Amies and Sons.

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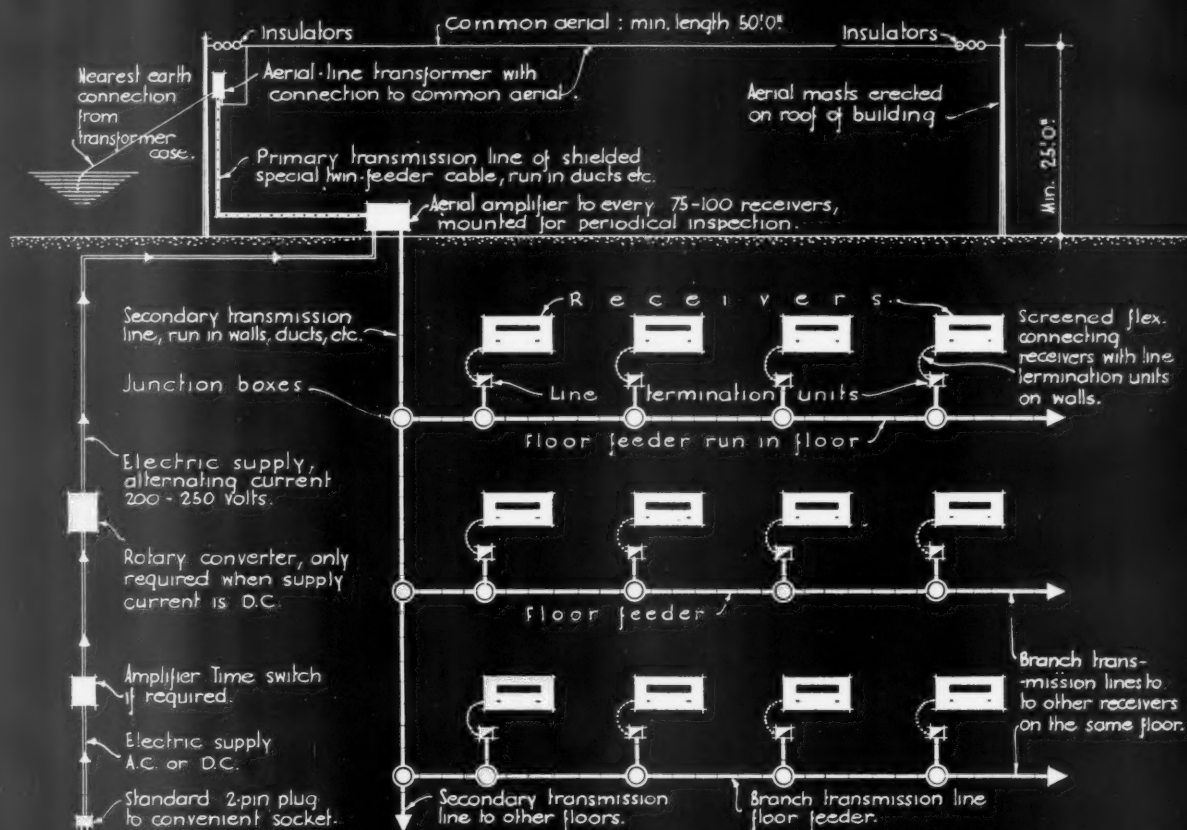
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DIAGRAMMATIC LAYOUT (SECTIONAL) OF A RADIO INSTALLATION.

## INSTALLATIONS OF FROM ONE TO ONE THOUSAND RECEIVERS.

A complete installation for supplying interference-free radio signals to a number of points incorporates the following items:

ITEM	NUMBER OF RECEIVERS				REMARKS:
	UP TO 12.	UP TO 36.	UP TO 100.	UP TO 1000.	
Common Aerial	1.	3.	1.	1.	To be as long (min. 50') & as high (min. 25') as possible & erected as far as practicable from interfering electrical apparatus.
Aerial line Transformer.	1.	3.	1.	1.	Connects the aerial to the Primary Transmission Line.
Primary Trans-mission Line.	1.	3.	1.	1.	Screened special cable connecting the Aerial-line Transformer to the Amplifier.
Amplifier.	•	•	1.	UP TO 10.	Must be mounted where accessible for inspection & where A.C. electricity supply is available. Tank rims etc. are suitable.
Rotary Converter	•	•	1.	1.	Only required where electricity supply is D.C.
Amplifier Time Switch.	•	•	1.	1.	For switching the Amplifier on, & off at specified hours.
Secondary Trans-mission Lines.	•	•	as required by total points.		Screened cable joining the Amplifier to the various receiver points.
Line Termination units.	1-12.	3-36.	37-100.	101-1000.	Junction units for connecting the receivers to the secondary transmission line. Screened flexible wires are used for connecting the receivers to the Line Termination Units.
Receivers	1-12.	3-36.	37-100.	101-1000.	Any modern receiver may be used for reception between 200 & 600, and 1000 & 2000 metres wave length.

NOTE: Aerials. With the use of correct equipment the aerial may be up to 500 ft. from the receivers without loss of signal strength.

Information from Universal Services.

INFORMATION SHEET: COMMUNITY AERIAL RADIO INSTALLATIONS  
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1. • *Oliver & Bayne*

THE ARCHITECTS' JOURNAL  
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INFORMATION SHEET

• 247 •

RADIO EQUIPMENT

Type of Product : Community Aerial Radio  
Installations

*General.*

This Sheet is the first of a series, and sets out diagrammatically the essential points and the main scheme of wiring buildings for a system which enables the occupants to receive radio programmes without the limitations imposed by relay methods or systems of a similar character. Independent receivers may be used up to the number of points fitted without loss of signal strength, and without interfering effects from electrical sources or between one receiver and another.

Correct erection and suspension of a suitable common aerial in a favourable position achieves much greater efficiency than is possible by other means such as independent aerials for individual receivers.

*Erection.*

Aerial wires are usually suspended from wooden masts, guyed and fitted with halliards as required.

Where the lay-out of the buildings permits, the aerials must be arranged outside the probable fields of electrical interference. Masts may be dispensed with, provided suitable anchorages are obtainable on the buildings.

In the case of residential estate developments, it is possible to arrange the aerial unobtrusively in the adjoining grounds, remote from the buildings, thus obtaining a measure of efficiency quite impossible by ordinary means.

A number of earthing connections throughout the length of the secondary transmission cable ensures positive earthing and forms a contributory safety factor for the buildings in the event of a lightning discharge.

*Wiring.*

To obtain a good installation, it is essential that wiring should be run during the construction period in a similar manner to the wiring for other electrical equipment.

The special cable used for feeder purposes is flexible, metallically braided with tinned copper wire and durably waterproofed, and in first-class work should be run in  $\frac{1}{2}$  in. conduit.

It is not, however, proof against mechanical damage such as the driving of nails or screws; for this reason conduit is recommended. Wiring may be run without conduit in pipe ducts, air ducts and similar protected positions; the branches only, from the ducts to the outlets, need be in conduit. The wiring may be run under the plaster without danger of deterioration.

*Junction Boxes.*

These boxes are of the usual type in use for internal electrical wiring and, as they carry no high tension current, are not subject to electrical strain.

*Termination Units.*

In small installations (up to 36 receiver points) these are small metal-enclosed units which may be fixed to the receiver cabinet or to the wall. When the unit is fixed to the wall a flexible connection is run from it to the receiver.

In the case of fittings for large installations working from amplifiers, two types of termination unit are available.

(1) Single fittings with aerial and earth connection sockets and with complementary three-pin plug. They are made in surface or flush types with cover plates to match other plates in the same room. The dimensions of the box are approximately  $2\frac{1}{2}$  in. by  $2\frac{1}{2}$  in. by  $2\frac{1}{2}$  in.

(2) Double fittings with three-pin plugs and sockets for aerial and earth connections and mains supply point. They are made in surface and flush types with cover plates to match other plates in the same room. The dimensions of the box are approximately:  $5\frac{1}{2}$  in. by  $2\frac{1}{2}$  in. by  $2\frac{1}{2}$  in. deep.

*Amplifiers.*

Are produced in two types:

(1) Box Form for mounting on the floor or preferably on a wall shelf. Amplifiers should be in an accessible

position for periodical inspection and should be protected from the weather, lift motor rooms or tank rooms on the roof of a building are suitable positions.

(2) Amplifiers may be mounted on a stand or panel in the manner of a telephone switchboard, where it is required that a feature should be made of the equipment.

Amplifiers are made with a high safety factor and may therefore be left in continuous operation.

A stand-by amplifier is not usually necessary. Power consumption of an amplifier is from 50 to 200 watts, according to size.

*Working Frequencies.*

The installations outlined are suitable for the reception of the standard broadcast frequencies 150 to 1,500 kilocycles (2,000 to 200 metres) and any modern type of receiver capable of being tuned within the above limits will be suitable for connection thereto.

Details of other equipment suitable for the frequencies likely to be used for the impending Television Service are available on request.

*Powerful Local Stations.*

Where it is desirable, amplifiers may be fitted with devices to ensure that powerful local transmitters keep their allotted place in the amplified band of wavelengths to the correct degree without tendency to swamp or cause other undesirable effects.

*Class of Building.*

The Community aerial system dealt with on this Information Sheet is especially suitable for large buildings or groups of buildings, such as Flats, Hospitals, Institutions and estates of a residential type.

In the case of individual houses whether terrace, semi-detached or separate, a community aerial system will give far greater efficiency than any orthodox arrangements except of the most elaborate and expensive kind.

In such cases houses can be up to 500 ft. from the aerial; lead covered feeder cables are run from the aerial to each house either above ground or underground as may be convenient.

*Cost of Installations.*

Owing to the varying conditions of each job and to the various alternatives in the type of equipment which may be provided, no standard figures can be laid down, but the following figures can be taken as a general guide; definite estimates will be given if required for any particular work.

(a) Single installations vary from nine to twelve guineas, depending upon the distances involved and the aerial masts required.

On roofs where only short masts are required the installation cost is less than in cases where one or two full masts must be provided.

(b) For installations of two to twelve points approximately forty-two to fifty shillings per point additional to (a), varying according to the length of cable required for each extension.

(c) For installations of up to thirty-six points approximately the same as (b) in triplicate 30 points are treated as three sets of ten, etc.

(d) For installations of forty points or more, approximately fifty shillings per point plus the cost per amplifier. One amplifier is required for each hundred or part of a hundred points. In the case of large installations the cost of the amplifiers is partially set off by economies in running the larger numbers of points.

(e) For Hospitals, Hotels and similar buildings the cost may be lower owing to the closer spacing of the points to be connected.

The figures given above relate to installations working off alternating current supplies of standard voltages: 200/250 volts, 40/100 cycles. Non-standard voltages involve a slightly increased cost per amplifier. Time switch control is not included in the above approximations, but £5/6 covers this very advantageous item, and D.C. mains supplies require additional rotary convertor.

*Receivers.*

This Information Sheet does not deal with the requirements of receivers, but it should be noted that better tonal quality is obtained if the speaker is separate from the receiver. Receivers may therefore be built-in if required and portable or fixed speakers provided separately. Speakers may be led off and fitted in adjoining rooms with or without switching arrangements.

Information from :

Address :

Telephone :

Universal Services

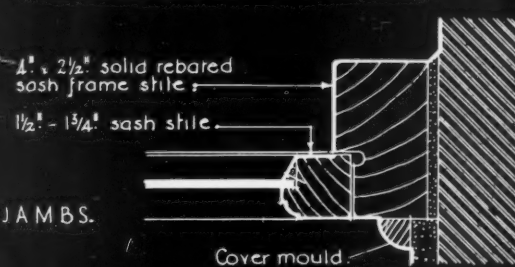
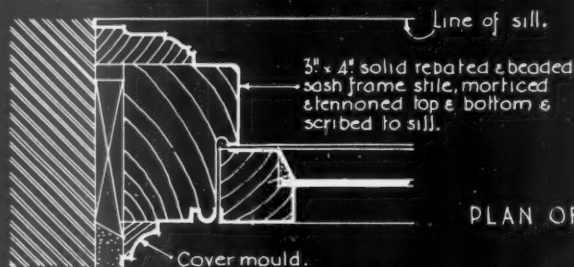
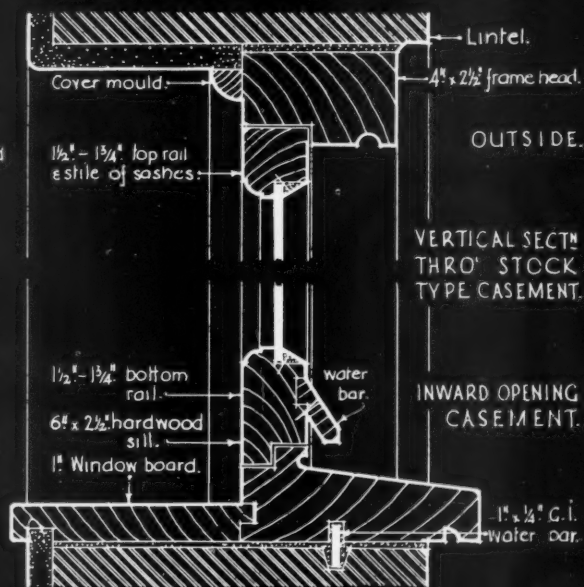
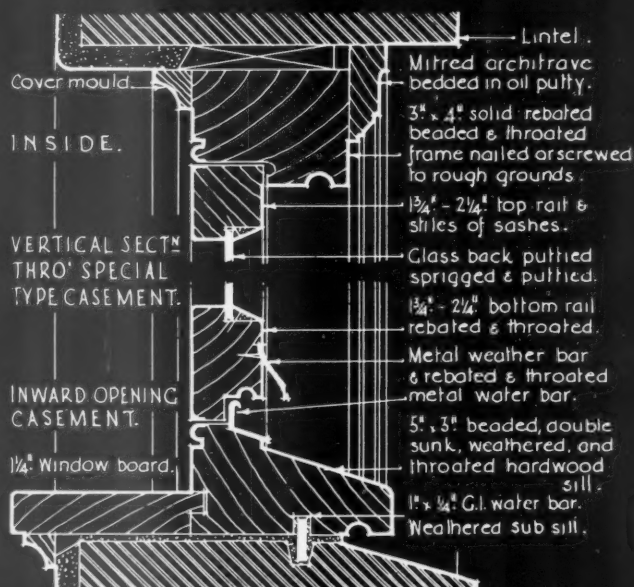
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Holborn 6856

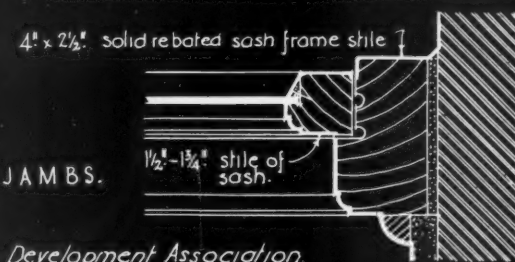
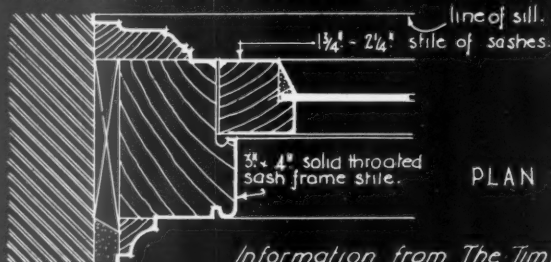
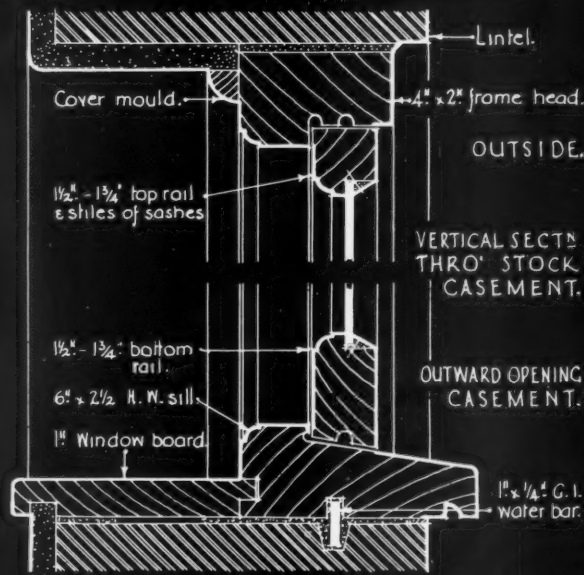
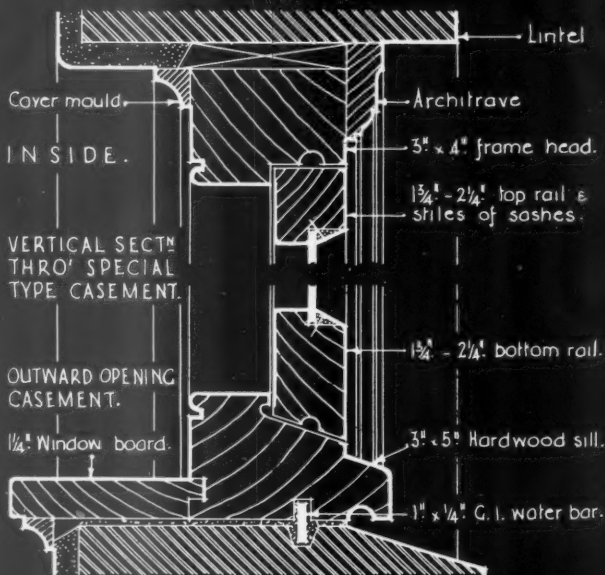








PLAN OF JAMBS.



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Information from The Timber Development Association.

INFORMATION SHEET: TYPES OF CASEMENT SASHES  
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W. C. 1. Oscar A. Bayne.

THE ARCHITECTS' JOURNAL  
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INFORMATION SHEET

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TIMBER

Type of Product : Casement Windows

This Information Sheet is one of a series dealing with the various uses of timber in building construction.

Details are given of inward opening casements and outward opening casements. In each case two windows have been shown, one showing the type of detail used in the heavier and more expensive class of joinery, and the other showing the detail used in more economical work where the amount of timber used and economy of working is closely studied.

It will be noticed that the sizes of the members used, the shaping of the members and the waterproofing devices are the main points of variation in each case.

The details given are intended to be representative of general practice in each class of work, the immense variation in the detail used by different architects and different joinery works make it impossible to give any standard or typical details.

Timbers.

Woods commonly used for such joinery work as that shown on this Sheet, are :

Red wood,  
White wood,  
Douglas Fir,  
Western Red Cedar,  
Teak.

Information from : The Timber Development  
Association

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